L7860-1

Business In Nebraska

October 1989
Vol. 45 No. 541

Prepared by the Bureau of Business Research
200 College of Business Administration
University of Nebraska-Lincoln
Lincoln, NE 68588-0406
402/472-2334

Changes in Nebraska Manufacturing Employment, 1979-1987

Stu Miller
Division of Research
Nebraska Department of Economic Development

Considerable controversy has arisen in recent years over the relative importance of new business creation and expansion of existing businesses as policies for influencing state economic growth. Equally heated have been discussions about the relative importance of small versus large businesses in providing new employment opportunities. Data that may shed some light on these questions are available in a census of all Nebraska manufacturers conducted by the Nebraska Department of Economic Development (DED) in the fall of odd numbered years.

Although the data gathered in this census are used principally to produce the *Nebraska Directory of Manufacturers*, the data also allow tracking of manufacturing establishments over time. Employment changes of individual establishments are recorded, as are additions and exits of establishments in the manufacturing sector. Because the 1989 survey has not been conducted, this article reviews changes between 1979 and 1987. A summary of recent annual manufacturing employment changes as reported by the Nebraska Department of Labor also is included.

Several trends emerge from this review

* There are substantial gross employment changes that lie behind the net changes normally reported in the popular press;
* Existing manufacturers have led recent employment expansion;
* Of these existing establishments, the smallest have shown the steadiest growth as well as the largest percentage of growth over the period considered.

Manufacturing Employment Trends in the 1980s

The 1980s have been a roller coaster period for the Nebraska economy. The downturn in agriculture in the early part of the period coincided with a general decline in nonfarm business activity prompted by a nationwide recession. In contrast, the late 1980s witnessed general economic recovery for both Nebraska and the nation. Of considerable economic importance to Nebraska is manufacturing, which represents a major component of the state's economic base. During the 1980s, manufacturing has experienced both substantial employment declines and, more recently, significant gains.

A review of manufacturing employment as reported by the Nebraska Department of Labor for the period 1979 to 1988

State Economic Scoreboard

Change from same month one year ago.
See Review and Outlook on page 9 for more details.

	State	Metro+	Nonmetro
Motor Vehicle Sales (June) Constant $	↑ 7.4%	↑ 8.1%	↑ 6.8%
Nonmotor Vehicle Sales (June) Constant $	↓ -0.5%	↓ -2.2%	↑ 1.3%
Building Activity (June) Constant $	↓ -7.5%	↓ -8.5%	↓ -6.0%
Employment (August)	↓ -0.3%	↓ -0.6%	↓ -0.1%
Unemployment Rate* (August)	↓ 3.1%	↓ 3.2%	↓ 3.0%

+Omaha and Lincoln. *Unemployment is this month's rate, not a percent change from year ago.

Table 1
Composition of Manufacturing Employment Change by Four Year Periods, 1979-1983 and 1983-1987

	1979-1983	1983-1987
Beginning Employment	110,500 *	86,700 *
Losses Due to Contractions	-18,200	-7,000
Gains Due to Expansions	8,300	18,500
Losses Due to Closings	-19,200	-13,700
Gains Due to Startups	5,300	9,400
Ending Employment	86,700	93,900

* Figures in this table are derived from a survey conducted during the fall of years shown. They represent employer estimates at the time of the survey and, therefore, should not be compared with the official estimates of employment issued by the Department of Labor.

Source: Nebraska Department of Economic Development, Division of Research

shows a decrease in the state's manufacturing annual average employment from a peak of over 99,000 in 1979 to a low under 85,000 in 1983. These average annual employment figures issued by the Nebraska Department of Labor should not be compared with the survey data analyzed in the remainder of this article.

Following a substantial employment gain in 1984, declines were experienced in 1985 and 1986. Since 1986, however, increases have been steady, with particularly impressive 1988 gains. The annual 6.9 percent increase for that year was the largest in 22 years, and the net creation of 6,100 new manufacturing jobs was the largest jump since 1943. The gains have continued into 1989, with employment for the first half of the year 5.1 percent above the same period in 1988.

Gross Employment Changes Greater Than Net

An initial striking observation from a review of the DED survey data is the extent to which net employment change figures mask a tremendous amount of positive and negative gross employment changes . Table 1 shows the composition of manufacturing employment change for the two periods 1979 to 1983 and 1983 to 1987 and indicates a net decrease in employment of about 24,000 between 1979 and 1983. This decrease is nearly catastrophic for a four year period and suggests that the recession of the period included a complete falling out across the sector. Yet the table also shows that there were 13,600 new jobs created in manufacturing during this period as a result of expansion of existing establishments and the startup of new operations in the state. Obviously, the losses due to contractions of existing manufacturers plus closings were far greater, totalling 37,400.

Likewise, during the 1983 to 1987 period, gross employment changes substantially exceeded the net figures. Actual employment increases were not 7,200, which is the difference between beginning employment and ending employment shown in Table 1, but totalled 27,900. This impressive gain was offset partially by total declines of 20,700.

Table 1 also shows that the employment expansion from 1983 to 1987 was led by existing industry. Employment gains due to the expansion of existing establishments were nearly double the increases from gains due to startups.

Table 2 provides an additional perspective. It shows the changes in the number of manufacturing establishments and associated employment changes for the full eight year period 1979 to 1987. A notable difference between 1979 and 1987 is the decline in the number of establishments from 1,922 in the beginning year to 1,702 in the ending year, a reduction of over 11 percent.

Another comparison of interest is the right column in Table 2. In 1987, manufacturing employment was increasing in Nebraska, but remained below the figure for 1979. Table 2 shows that employment changes from 1979 to 1987 occurring from expansions and contractions nearly offset one another. The table also shows, however, that the increase in employment from startups during the period was far less than the loss due to closings.

Behavior of Small Versus Large Establishments

Another controversy exists over the relative roles of small and large businesses in economic change. Table 3 contains establishment and employment summaries.

A striking statistic derived from Table 3 is that 78 percent of manufacturing establishments (those with less than 50 employees) employed less than 17 percent of all manufacturing employees in 1979. Two-thirds of the establishments (those employing less than 25) employed less than 10 percent of the total. On the opposite end of the spectrum, the largest establishments (500+ employees) represented only 2 percent of all establishments, but provided nearly 40 percent of total jobs.

In terms of net employment change of these existing establishments during the eight year period from 1979 to 1987, the smaller firms (less than 100 employees) increased employment, while the larger establishments experienced decreases.

Table 2
Manufacturing Establishments by Change Component and Associated Employment Change, 1979-1987

Change Characteristic	Number of Establishments	Employment Change
Establishments in 1979	1,922	—
Expansions	538	+13,100
Contractions	595	-13,600
Same Employment 1979/1987	147	—
Closings	641	-31,600
Startups	421	+15,500
Establishments in 1987	1,702	—

Source: Nebraska Department of Economic Development, Division of Research

Table 3
Manufacturing Employment Change by Establishment Employment Size: 1979-1987, 1979-1983, and 1983-1987

Employment Size Class	1979 Establishments Number	1979 Establishments Employment	Employment Change 1979-1987*	Employment Change 1979-1983*	Employment Change 1983-1987*
<25	1,270	10,870	1,373	523	1,173
25-49	225	7,555	268	-508	1,217
50-99	201	13,762	969	-182	2,100
100-499	184	36,675	-513	-4,389	1,817
500+	42	41,666	-2,576	-5,338	5,240
Totals	1,922	140,528	-479	-9,894	11,547

* Employment change figures represent the net of all positive and negative changes occurring only for establishments in existence during the first year in the heading.

During the four year economic downturn between 1979 and 1983, all but the smallest establishment classes lost employment. During the expansionary period from 1983 to 1987, all establishment size classes experienced net growth.

In percent terms, while the net employment change of all establishments over the eight year period was less than 0.5 percent, the net increase for establishments with less than 100 employees was 8.1 percent, and the increase for the smallest (less than 10 employees) category was 12.6 percent. Clearly, the state's smallest manufacturers play an important role in the stability and growth of the economy.

Conclusions

A review of manufacturing data for the years 1979, 1983, and 1987 yields the following conclusions:

- Economic activity is much more dynamic than revealed by the net figures normally used in economic reports. The gross employment change figures show four year gains and losses far greater than indicated by the net figures. A review of such figures annually would reveal even greater changes.
- The change in employment by existing companies is far greater than the changes occurring from establishments that are new to the state (either starts by entrepreneurs or relocation of plants.) This suggests that recent public policy encouraging the retention and expansion of existing industry is sound.
- A closer review of existing industry shows that the smaller 1979 manufacturing establishments experienced steadier and greater net employment growth than did the larger establishments.

Substantial credit goes to Dale Mundy, of the Department of Economic Development Research staff, for computer work reflected in this article.

Direct Impacts of Irrigation Under Drought Conditions

Merlin W. Erickson
Research Associate
Bureau of Business Research

F. Charles Lamphear
Director
Bureau of Business Research

Droughts have occurred in Nebraska several times since the state was settled. The "dirty thirties" are remembered by some, the fifties by others, while the seventies and the past two years are vivid in the minds of many.

This article is the third in a series on the economic importance of irrigation in Nebraska. The first article, which appeared in the December 1988 issue of this publication, examined the importance of irrigation to the state's economy for 1985. The second article appeared in the August 1989 *Business in Nebraska* and focused on irrigation development in the state before 1940.

This article reports the results of a current research project at the Bureau of Business Research on the economic importance of irrigation under different simulated drought conditions. One of the conditions is referred to as a *moderate drought* that represents approximately twenty percent below normal annual precipitation. The second condition is labeled a *substantial drought* that represents approximately forty percent below normal annual precipitation. Decreases in

Figure 1
Nebraska Weather Bureau Regions and Crop Reporting Districts

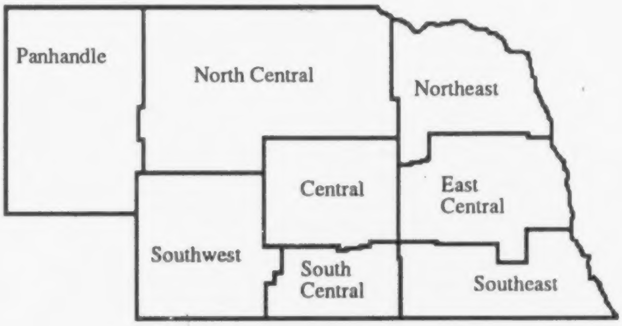


Table 1
Nebraska Normal Monthly Precipitation by Region
(Inches)

Month	Panhandle	North Central	Northeast	Central	East Central	Southwest	South Central	Southeast
January	0.38	0.41	0.52	0.45	0.65	0.3[illegible]	0.44	0.73
February	0.41	0.64	0.85	0.68	0.95	0.4[illegible]	0.68	0.98
March	0.92	1.12	1.64	1.44	1.83	1.0[illegible]	1.48	2.04
April	1.75	2.18	2.46	2.39	2.78	1.7[illegible]	2.11	2.76
May	3.08	3.34	3.89	3.64	4.06	3.20	3.65	4.01
June	3.08	3.64	4.18	3.86	4.27	3.31	4.09	4.38
July	2.35	3.01	3.19	3.15	3.25	2.94	3.19	3.81
August	1.65	2.43	3.14	2.74	3.64	2.10	2.92	3.93
September	1.28	1.81	2.36	2.19	3.05	1.65	2.44	3.54
October	0.82	1.09	1.54	1.27	1.92	0.97	1.34	2.18
November	0.49	0.65	0.86	0.70	1.08	0.58	0.79	1.25
December	0.40	0.50	0.68	0.57	0.76	0.40	0.50	0.79
Annual	16.61	20.82	25.31	23.08	28.24	18.87	23.63	30.30

Note: Normals presented here are based on records for the 30 year period 1951-1980

Source: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, *Divisional Normals and Standard Deviations of Temperature (F) and Precipitation (Inches) 1931-80 (1931-60, 1941-70, 1951-80)*

precipitation were simulated to occur randomly throughout the study year 1985. Both simulated drought conditions were viewed in the study as a single year event. Therefore, normal subsoil moisture was assumed at the beginning of the crop-growing season.

Normal precipitation and deviations from normal were calculated on the basis of climatic precipitation data for the 30 year period from 1951 through 1980. The precipitation data for this 30 year period exhibit definite geographic patterns in Nebraska (Table 1). Average annual precipitation ranges from about 16.6 inches in the Panhandle to about 30.3 inches in the Southeast. Most of the precipitation occurs as rainfall during the crop-growing season from April through September. The wettest month for all crop reporting districts (CRDs) is June, except in the Panhandle where May and June tie for the wettest month. Figure 1 identifies Nebraska's eight CRDs. During the winter months, some of the precipitation appears as snow and/or ice.

To understand the impact of weather on crop yields and the economic importance of irrigation on the state's economy, several drought simulations were conducted. These simulations are the moderate drought condition and the substantial drought condition discussed earlier. These drought conditions were imposed on the state's irrigated land base of corn (for grain), grain sorghum, soybeans, and wheat for 1985. In 1985, this irrigated land base totaled 6,012,000 acres (hereafter referred to as the study area). Nearly 84 percent (5,050,000 acres) of this study area was devoted to corn for grain production in 1985, indicating the importance of irrigation in Nebraska for the production of corn. The following crop acres also were irrigated in 1985: grain sorghum-217,000 acres; soybeans-640,000 acres; and wheat-105,000 acres.

The two drought conditions were imposed on the study area using two scenarios. First, each drought condition was imposed on the study area while additional irrigation water was applied to offset the precipitation deficit during the growing season. Second, each drought condition was imposed on the study area while the removal of all irrigation from the study area was simulated. Also included in this second scenario was the simulation of dryland production in the study area for normal weather conditions, which hypothetically converted the study area to dryland crop production. (The study area is irrigated cropland.) An examination of drought effects on yields, total crop outputs, and production expenses on the study area for the situations with and without irrigation provided a method for determining the net importance of irrigation during periods of drought conditions.

Because the study area included land from all of Nebraska's eight CRDs, variations in soil conditions, weather conditions, etc. across the CRDs had to be taken into consideration for the estimation of crop yields. This was accomplished through the use of a computer model developed by U.S. Department of Agriculture specialists in Texas called the Erosion Productivity Impact Calculator (EPIC) model.

Two representative farming areas in each CRD were chosen for the study. Nearby weather stations were identified to provide the weather information needed by the model. The locations were chosen to reflect variations within the CRD.

Agriculturally important soils that are associated with the locations chosen for the weather stations in each CRD were selected by the Soil Conservation Service of the U.S. Department of Agriculture. These selections insured that soils and climates matched for the simulation runs.

Planting and harvest dates for the four study crops of corn for grain, grain sorghum, soybeans, and wheat were assigned using data reported by the National Agricultural Statistics Service (NASS) of the U.S. Department of Agriculture. Local tillage practices for each crop were identified from crop production budgets prepared for areas in Nebraska.

Weather data sets also were prepared to provide additional information about the economic effects of each drought simulation; that is, the effects of the moderate drought condition and the effects of the substantial drought condition.

CRD level information on soil conditions, planting dates, and harvest dates, etc. was input into the EPIC model to generate crop yield estimates for the study area that reflected the effects of a moderate drought and a substantial drought. These yield estimates are shown in Table 2. The study assumed that the irrigated crop yields would be maintained under the simulated dryland cropping conditions with the application of additional irrigation water. Table 2 also gives the estimated crop yields for the study area on the basis of no irrigation for normal weather (precipitation) conditions and the crop yield estimates for the two simulated drought conditions.

A comparison of columns one and two shows the net contribution of irrigation during normal weather conditions. This comparison (as all comparisons reported in this article) reflects 1985 conditions of technology. Irrigation's net direct contribution to corn yields for the study area was 42 bushels per acre (141.5 - 99.5 = 42.0). In total output terms, irrigation's total net contribution to corn production for the study area was 212,100,000 bushels (42 bushels/acre x 5,050,000 = 212,100,000 bushels). The value of this added production at a market price of $2.38 per bushel, based on 1985 market conditions, is slightly more than $500 million.

A comparison of the corn yield figure in column four with the corn yield figure in column one shows that irrigation would contribute, on a per acre basis, 92.5 bushels of corn above the 49.0 bushel amount that would have been grown during a substantial drought condition. For a substantial drought condition, irrigation almost triples corn production. Irrigation's net contribution of 92.5 bushels per acre for the substantial drought scenario totals, in value terms, over $1.1 billion for the 5,050,000 acres of corn in the study area. Accumulated values for the four crops with moderate and substantial drought scenarios total about $0.9 billion and $1.2 billion respectively (Table 3).

Several comparisons using data from Tables 2 and 3 can be made between irrigated crops and the simulated dryland equivalents, such as dryland production under a moderate drought condition. These comparisons show the direct impact or net direct contribution that irrigation makes to the state's total crop output.

Irrigation's direct contributions to the state's economy generates additional economic activity in the state. This additional activity, called the indirect impact, also was examined in the study. The indirect impact of irrigation will be reported in the next issue of *Business in Nebraska.*

Table 2
Crop Yields for Irrigated Crops, Nonirrigated Crops, and Two Scenarios of Drought Conditions
(Bushels per Acre)

Crop	Irrigation (1)	Dryland (Normal Weather) (2)	Dryland (Moderate Drought) (3)	Dryland (Substantial Drought) (4)
Corn, Grain	141.5	99.5	72.6	49.0
Grain Sorghum	95.0	78.1	61.6	45.5
Soybeans	40.0	34.5	26.2	18.9
Wheat	55.0	38.2	30.6	22.7

Table 3
Value of Crop Production and Changes in Value Under Various Conditions on 1985 Irrigated Land Base
($000s)

Situation	Total Value of Production	Change in Value of Production
Irrigated	$ 1,891,122	—
Dryland, Normal Weather	1,354,859	$536,263
Moderate Drought	994,962	896,160
Substantial Drought	677,952	1,213,170

Mark Your Calendars

The second annual State of the State Conference sponsored by the Bureau of Business Research will be held in three locations in 1990:

Ogallala............................January 16
Holiday Inn

Lincoln.............................January 23
Nebraska Center
for Continuing Education

Omaha..............................February 1
Holiday Inn
I-80 at 72nd Street

Each conference will be tailored to the area--national and state economic forecasts for the new year will be part of each. At Ogallala, we will focus on agriculture and economic development in the western part of the state. In Omaha, we will look at metropolitan Nebraska and compare it to similar mid-American growth centers. In Lincoln, the focus will be statewide issues, such as economic development and agriculture. Meetings will feature speakers from the academic, government, and business communities.

Agricultural Diversion

Diversification long has been discussed among agricultural producers and suppliers in this state. *Nebraska Crop Statistics, 1908* (published by the Bureau of Labor and Industrial Statistics) presented an unusual farming venture:

Frog Farming

In addition to the ordinary game birds of Nebraska, there is a steadily increasing crop of Great Western bullfrogs. They are as green as Irish turf, grow to a great size, and "fly high" as to market. Sloughs and ponds are being stocked by the State Fish Commission, and after a while frog saddles should be within reach of all. The hunter doesn't have to show a license before bringing a frog ashore - thus making these night warblers peculiarly the poor man's game, while at the same time frog legs remain the tidbit of the epicure. This industry is still in its infancy, but gives fine promise of satisfying growth.

Merlin W. Erickson

Review and Outlook

John S. Austin

National Outlook

With the first three quarters of the year behind us, it's a good time to examine how the economy may fare the rest of the year. First, let's review briefly the first nine months of the year. In contrast to many forecasts made at the end of last year, 1989 has shown substantial growth. First quarter real GNP advanced a strong 3.7 percent, inflated by a rebound from the drought that plagued the economy in 1988. When the drought impact is deleted, the growth rate was a more moderate 1.5 percent.

The second quarter results were surprising. Most forecasters expected that the downturn in growth rates would begin in the second quarter. Although the so-called final GNP growth rate of 2.5 percent is less than the first quarter 3.7 percent figure, the advance in the second quarter was larger than the 1.5 percent increase without the drought impact.

Although the third quarter has ended, the first estimate of third quarter GNP will not be revealed until the end of this month. That first estimate will be a rough guess. Nevertheless, we can make some reasonable inferences about the third quarter numbers. Let us examine the major components of GNP, namely consumer expenditures, residential construction, nonresidential investments, government expenditures, and net exports.

The consumer sector represents two-thirds of GNP. Although consumer confidence has dipped recently, it remains relatively strong. Retail sales in August increased 0.7 percent, in contrast to the 0.5 percent rise in July. August car sales showed an increase of 2.6 percent. Automobile sales in the third quarter will be fairly strong. There has been a big push with large and well-publicized dealer incentives to sell end-of-the-year models. At the same time, there have been announcements of sizeable increases in the list prices of 1990 models. Consequently, many customers rushed to dealerships in the third quarter and bought 1989 models. It is likely that Detroit has moved sales from the fourth quarter to the third quarter by this maneuver. When automobile sales were deducted from the retail sales data, the August figure shows an increase of only 0.2 percent. Other durable retail sales were fairly good, but nondurable sales suffered. It is likely that those households buying new automobiles cut their purchases of nondurables. Automobile sales were strong in early and mid-September reports. The third quarter consumption sector as a whole will show substantial growth.

There is a mixed picture in the housing area, another major swing item in the economy. Housing starts peaked in January and decreased until May. June and July saw gains, while August housing starts fell 5.0 percent. Nevertheless, August housing start levels were still stronger than the housing start levels in May.

Nonresidential investment is advancing; however, the pattern of advance is peculiar. Constant dollar private nonresidential spending has been roughly flat, with some monthly sawtooth disturbances since the fourth quarter of 1987. A slight upturn started in May of this year and continued in June and July. Investment in equipment is advancing sharply. Despite the reluctance to create new plants, productive capacity is increasing. As a result, there is less pressure on prices, at least in the industrial sector. Nonresidential investment, at best, will make a small positive contribution to third quarter GNP.

Federal expenditures have been somewhat erratic. State and local government expenditures tend to follow a steady growth pattern.

The net exports of goods and services have shown some healthy gains in the first half of this year. Net exports add to GNP. We suspect that the gains will continue in the third quarter. The prospects in the net export area depend upon the value of the U.S. dollar. At this writing, the dollar has shown some strengthening, followed by a short-term collapse. Low values of the dollar will tend to increase exports and decrease imports, with an overall gain in net exports. There are some lags in the impact of changes in the exchange rates on the net export figures. It will take some time to sort the impact of recent increases in the dollar. For the third quarter, net exports will provide a small boost to the GNP figures.

To make reasonable estimates of the fourth quarter, projections of this year's trends and some speculation are in order.

(continued on page 9)

Table I
National Indicators

	Annual		Quarterly (SAAR)			
	1987	1988	1988:III	1988:IV	1989:I	1989:II
Real GNP (percent change)	3.7	4.4	3.2	2.7	3.7	2.5
Real Consumption (percent change)	2.8	3.4	3.3	3.0	2.0	1.9
Housing Starts (millions)	1.6	1.5	1.5	1.6	1.5	1.4
Auto Sales (millions)	10.3	10.6	10.4	10.5	9.8	10.3
Interest Rate (90 day T-bill)	5.8	6.7	7.0	7.7	8.5	8.4
Unemployment Rate (percentage)	6.2	5.5	5.5	5.3	5.2	5.3
Industrial Production Index (1977=100)	129.8	137.2	138.4	139.9	140.7	141.4
Money Supply, M2 (percent change)	6.6	5.1	3.8	3.6	1.9	1.3

Source: Bureau of Economic Analysis
NOTE: SAAR—Seasonally Adjusted at Annual Rates

Business in Nebraska--A Readership Survey

The *Business in Nebraska* staff constantly is looking for ways to better serve the citizens of Nebraska. Your responses to the questionnaire below will help us determine what information *Business in Nebraska* readers use and need. Please detach this page, fold, and return it. No postage is necessary.

Section I: Please indicate your agreement or disagreement with the following statements.

	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
1. The articles are informative	1	2	3	4	5
2. The graphs are difficult to read	1	2	3	4	5
3. The writing style is appropriate for the reading audience	1	2	3	4	5
4. The magazine does an inadequate job covering Nebraska news	1	2	3	4	5
5. I would recommend *Business in Nebraska* to my friends	1	2	3	4	5
6. The articles are not appealing to my reading needs	1	2	3	4	5
7. *Business in Nebraska* accurately forecasts economic trends	1	2	3	4	5
8. The magazine is too long	1	2	3	4	5
9. The magazine is readable	1	2	3	4	5
10. The magazine has excellent graphics that really catch my eye	1	2	3	4	5
11. The magazine is too stuffy	1	2	3	4	5
12. The layout and typesetting of the magazine are excellent	1	2	3	4	5
13. I am most interested in the statistical data in the tables	1	2	3	4	5
14. I am most interested in reading the magazine's articles	1	2	3	4	5
15. Readers should be able to contribute articles	1	2	3	4	5

Section II: Please circle how frequently you read the following features.

	Always Read	Usually Read	Seldom Read	Never Read
1. County of the month	1	2	3	4
2. Employment in Nebraska table	1	2	3	4
3. Price indices table	1	2	3	4
4. City business indicators table	1	2	3	4
5. City business index chart	1	2	3	4
6. Sales graph	1	2	3	4
7. Sales map	1	2	3	4
8. Retail sales table	1	2	3	4
9. Scoreboard	1	2	3	4
10. Review and outlook	1	2	3	4

Section III: Various topics have appeared in *BIN*. Please check the items you recall reading.

_____ The Nebraska Worker: A Profile In Employment Growth
_____ Chickpeas in Southwestern Nebraska: Crop Diversification as an Economic Development Tool
_____ Tax Planning; Make It Part of Your Business Plan, Personal Finance Plan, and Estate Plan
_____ The Importance of Irrigated Agriculture to Nebraska's Economy
_____ Nebraska Economic Projections for 1989
_____ A Model of New Nebraska Industry
_____ Nebraska Export Industries: An Examination of Those With Greatest Potential
_____ The National Debt and the Federal Deficit
_____ Nebraska's Exports of Agricultural Commodities
_____ A Leading Economic Index for Nebraska
_____ A Primer on Capital Budgeting
_____ A Comparison of Economic Growth in Nebraska and the Plains
_____ Early Developments in Nebraska Irrigation

Of the items you checked above, please indicate the two you were most interested in reading:

1. ____

2. ____

Section IV: The statements below will help us classify your responses.

In what county do you live?______________________________

What is your occupation?______________________________

On the average, how often do you read *Business in Nebraska*? ____________________

Section V: Other.

Please give us the names and addresses of any persons you know who would like to receive *Business in Nebraska.*

What ideas do you have for improving future issues of *Business in Nebraska*? Please feel free to suggest topics, feature columns, areas for expanded coverage, or areas to delete.

Please detach this form, fold it in thirds, and drop in any mail box. No postage is necessary. Thank you for your help.

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 355 LINCOLN, NE
POSTAGE WILL BE PAID BY ADDRESSEE

Bureau of Business Research-0406
The University of Nebraska–Lincoln
Lincoln, NE 68501-9988

(continued from page 6)

There likely will be some weakness in the consumer sector due to a drop in the consumption of automobiles in the fourth quarter. Higher list prices for 1990 models may induce some sticker shock. The major auto producers already have announced incentive programs for the new models. Weak fourth quarter auto sales imply that the consumer durable sector may show no expansion or even a small decrease from third quarter levels. Consumption of services and nondurables is less volatile and will show some increase. Federal government spending will continue to waffle in the fourth quarter. The investment sector outside housing is likely to show small advances, with continued gains in equipment purchases.

A key to forecasting the housing market is interest rates—one of the hardest economic variables to predict. It seems now that interest rates will be fairly stable for the balance of the year. Stability in interest rates is a real estate agent's dream. Variability in interest rates leads to uncertainty on the part of prospective home purchasers and may delay house buying plans. When relatively low and stable interest rates are coupled with growing levels of personal income, the outlook for housing brightens. The forecast stability of interest rates derives from the Federal Reserve's announcements that no further changes in policy are needed at this time.

Inflation gains should be moderate through the balance of this year, although wholesale oil prices have increased somewhat from low summer levels. It is likely that the Producer Price Index will show some gains in the fourth quarter. The Consumer Price Index probably will show increases in the 5 percent annual rate area. Neither of these reports should cause consternation at the Federal Reserve.

On the whole, we expect the fourth quarter will show positive gains, but at lower rates than in the first, second, and third quarters of this year. Thus, we expect real growth to be in the area of 1.5 to 2.0 percent in the fourth quarter. That estimate is in line with the latest consensus from the *Blue Chip Economic Indicators*. That forecast shows third quarter GNP advancing 1.7 percent, fourth quarter GNP increasing 1.4 percent, and a gain for 1989 as a whole of 2.8 percent. While those numbers are reasonable, I would speculate that the actual number will be a bit stronger when reported.

Unemployment in July and August stood at 5.2 percent. The Consumer Price Index in August was the same as the July level. The Consumer Price Index on a year-to-date basis now stands 4.8 percent above 1988 levels. The Producer Price Index continued a three month decline in August, decreasing 0.4 percent. Energy prices caused most of that deterioration, dropping 7.3 percent on a wholesale basis. When energy prices are deducted, the Producer Price Index shows an increase of 0.4 percent. In recent weeks energy prices have reversed their downward trend somewhat. It is likely that the next month's Producer Price Index will show an increase.

Industrial production advanced 0.3 percent in August, led by automobiles and coal mining equipment. Those special factors are unlikely to repeat next month. Other parts of the index slowed. Thus, there are some signs of future weakness in the industrial area. Future weakness also is indicated by a recent survey of the National Association of Purchasing Managers. Their index slipped in August to 45.2 percent versus 46.0 percent in July. Whenever their index is below 50.0 percent, it indicates that the industrial sector is slowing.

One other bad news item is that the relationship of business inventories and sales moved in the wrong direction in July. Thus, while business inventories advanced 0.6 percent, business sales decreased 0.9 percent. As a result, the ratio of inventory to sales rose from 1.51 to 1.54. That represents a continuation of a

Table II
Employment in Nebraska

	Revised July 1989	Preliminary August 1989	August % Change vs. Year Ago
Place of Work			
Nonfarm	709,249	710,736	3.4
Manufacturing	98,881	99,542	3.5
Durables	47,934	48,235	2.1
Nondurables	50,947	51,307	4.7
Mining	1,981	2,021	15.5
Construction	28,567	28,526	6.5
TCU*	47,717	47,952	5.7
Trade	184,030	184,547	3.2
Wholesale	53,171	52,868	4.6
Retail	130,859	131,679	2.6
FIRE**	49,412	49,354	2.4
Services	166,084	166,770	4.5
Government	132,577	132,024	0.8
Place of Residence			
Civilian Labor Force	824,684	825,016	-0.92
Unemployment Rate	3.4%	3.1%	

*Transportation, Communication, and Utilities
**Finance, Insurance, and Real Estate

Source: Nebraska Department of Labor

Table III
Price Indices

	August 1989	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U* (1982-84 = 100)			
All Items	124.6	4.7	5.0
Commodities	116.7	4.3	5.0
Services	133.1	5.1	5.0
Producer Price Index (1982 = 100)			
Finished Goods	113.3	4.2	5.3
Intermediate Materials	112.1	3.4	5.5
Crude Materials	101.0	4.2	7.4
Ag Prices Received (1977 = 100)			
Nebraska	154	0.7	9.4
Crops	127	-9.3	23.5
Livestock	172	6.8	3.6
United States	144	0.0	9.7
Crops	128	-5.2	14.8
Livestock	160	5.3	6.2

U* = All urban consumers
Source: U.S. Bureau of Labor Statistics

trend in the wrong direction. We hope that businesses will be able to move their inventories in line with sales fairly quickly. The ratio of inventory to sales is, and should be, a closely watched barometer of the health of the business environment.

Nebraska Outlook

Of immediate interest is whether Nebraska has shared in the national economic progress so far this year and whether Nebraska will share in the expected continuation of growth for the balance of this year. Although information on the Nebraska economy is not as current as information on the nation's economy, the data available indicate that our state has been part of the national progress. There are two broad indicators that give a relatively current view of Nebraska's economic health. These indicators are employment and retail sales.

Retail sales in the first half of this year increased 8.6 percent versus the first half of 1988. Nebraska auto sales outpaced national sales in the first half. Through June, Nebraska motor vehicle net taxable sales jumped 9.6 percent.

In the employment area, the labor force showed a decrease of 0.2 percent from a year ago in June. Labor force numbers had risen 0.8 percent in May from the previous year. The labor force data, a count of Nebraskans in the job market, contrast with the employment data collected on a job count basis, the so-called wage and salary job figures. In May, wage and salary jobs increased 3.8 percent, while the labor force showed a gain of 0.8 percent. How can these two sets of figures be reconciled? One factor is multiple job holders in the state, so-called moonlighters. If a Nebraskan holds two jobs, that person is counted once in the labor force data and twice in the jobs data. In addition, there are persons crossing borders to hold Nebraska jobs. An example of the phenomenon is the Iowa worker coming to Omaha or South Sioux City for a job. These persons would appear in a count of Nebraska wage and salary jobs, but they would not be counted in the Nebraska labor force numbers There are Nebraskans who hold jobs in other states as well. Personal income data show that there is more inflow of individuals into Nebraska for jobs than there is an outflow of Nebraskans to other states for jobs.

Table IV
City Business Indicators
June 1989 Percent Change from Year Ago

The State and Its Trading Centers	Employment (1)	Building Activity (2)
NEBRASKA	-0.2	-2.7
Alliance	0.5	-34.6
Beatrice	-0.4	-36.0
Bellevue	-0.8	-23.7
Blair	-0.8	133.4
Broken Bow	0.1	-90.0
Chadron	-0.4	752.6
Columbus	0.3	20.8
Fairbury	-0.3	-87.2
Falls City	-0.5	-48.0
Fremont	-1.0	-14.0
Grand Island	-0.2	-4.5
Hastings	-0.2	-12.2
Holdrege	-0.2	1116.8
Kearney	0.1	-50.4
Lexington	1.1	323.5
Lincoln	0.3	-0.7
McCook	-0.3	-86.5
Nebraska City	-0.1	-43.7
Norfolk	-0.7	22.4
North Platte	0.4	-7.8
Ogallala	-0.4	-44.1
Omaha	-0.8	-3.2
Scottsbluff/Gering	-1.5	90.9
Seward	0.4	-26.8
Sidney	1.0	-43.2
South Sioux City	-1.2	170.8
York	-0.4	-21.8

(1)As a proxy for city employment, total employment (labor force basis) for the county in which a city is located is used

(2)Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes

Sources: Nebraska Department of Labor and reports from private and public agencies

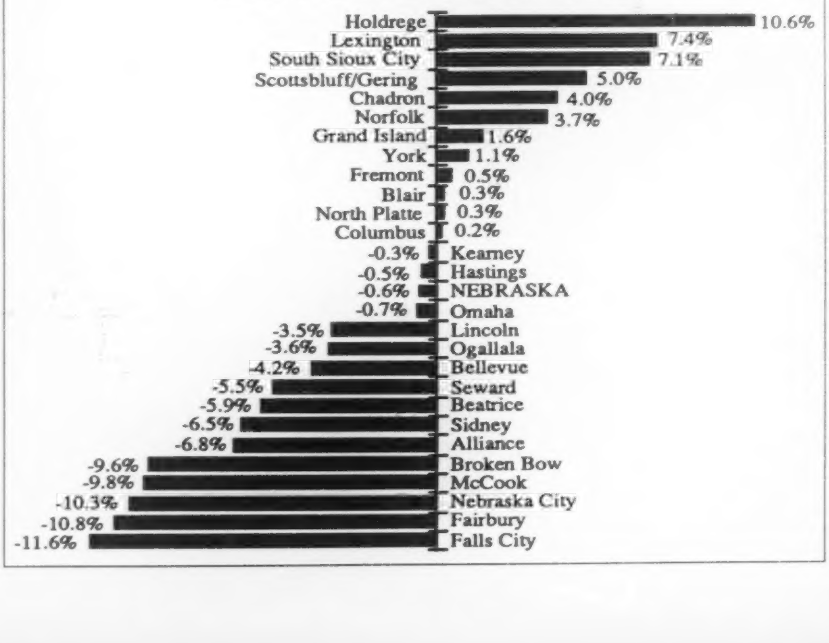


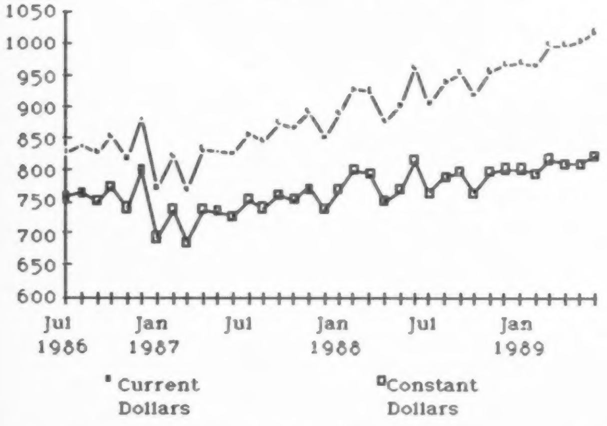
Figure I
City Business Index
June 1989 Percent Change from Year Ago

Table V
Net Taxable Retail Sales of Nebraska Regions and Cities

Region Number and City (1)	City Sales (2) June 1989 (000s)	City Sales (2) % Change vs. Year Ago	Region Sales (2) June 1989 (000s)	Region Sales (2) % Change vs. Year Ago	YTD % Change vs. Year Ago
NEBRASKA	$899,014	4.7	$1,045,077	5.7	8.6
1 Omaha	309,508	5.0	391,142	5.7	9.7
Bellevue	12,447	-0.6	*	*	*
Blair	4,303	-2.6	*	*	*
2 Lincoln	116,806	-3.1	139,128	-0.3	5.3
3 South Sioux City	4,870	12.3	7,241	14.5	2.7
4 Nebraska City	3,332	-12.2	18,151	-1.3	2.1
6 Fremont	15,957	9.5	29,997	10.9	5.5
West Point	2,578	5.3	*	*	*
7 Falls City	1,930	-14.1	8,674	-2.3	-0.5
8 Seward	3,877	-4.3	14,767	-0.1	3.2
9 York	6,815	11.3	16,474	13.1	13.1
10 Columbus	14,538	3.4	27,862	7.5	7.5
11 Norfolk	19,002	12.7	34,875	8.8	9.3
Wayne	2,408	-8.0	*	*	*
12 Grand Island	34,409	10.2	50,232	12.7	11.2
13 Hastings	15,649	6.2	27,238	9.6	8.6
14 Beatrice	7,161	-3.0	17,279	-1.8	1.1
Fairbury	2,763	3.7	*	*	*
15 Kearney	19,243	12.6	29,134	16.1	11.8
16 Lexington	5,689	5.4	16,288	0.1	7.7
17 Holdrege	4,422	2.2	8,811	7.4	7.5
18 North Platte	16,639	6.7	21,426	7.8	4.5
19 Ogallala	6,397	4.2	13,421	7.3	13.3
20 McCook	7,501	5.5	11,174	5.3	4.9
21 Sidney	3,651	-4.4	7,691	-6.6	3.6
Kimball	1,575	-19.5	*	*	*
22 Scottsbluff/Gering	18,057	11.6	26,211	11.1	12.3
23 Alliance	4,910	-6.3	14,343	-3.9	2.9
Chadron	2,673	-9.2	*	*	*
24 O'Neill	4,623	14.3	15,980	9.7	12.1
Valentine	2,640	-9.1	*	*	*
25 Hartington	1,435	0.3	8,378	-0.6	2.5
26 Broken Bow	3,479	8.9	12,731	5.7	6.6

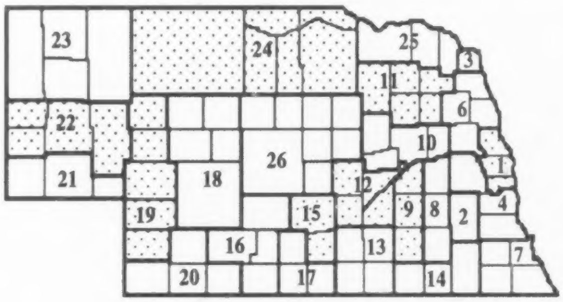
(1) See region map
(2) Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales
* Within an already designated region
Compiled from data provided by the Nebraska Department of Revenue

Figure II
Nebraska Net Taxable Retail Sales (Seasonally Adjusted, $ Millions)



(1) The Consumer Price Index (1982-84 = 100) is used to deflate current dollars into constant dollars

Figure III
Region Sales Pattern
YTD as Percent Change from Year Ago



Shaded areas are those with sales gains above the state average. See Table V for corresponding regions and cities

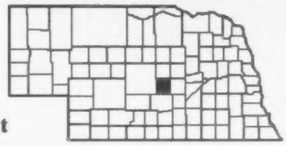
Whenever we look at the Nebraska economy, we need to look at the agricultural economy as well. Here, the data lags are immense. Furthermore, data often are revised. Therefore, we are forced to look at some evidence and do some reasoning about what has been happening this year In relative terms, 1988 was a good year for Nebraska farmers as a whole. The drought that affected production in other states resulted in high agricultural prices; however, overall Nebraska harvests in 1988 were near normal levels, although some areas in eastern Nebraska were below normal. There were also large agricultural payments in early 1988. As a result, the base year of 1988 showed reasonably healthy agricultural income figures compared to other agricultural states.

The question at hand is whether 1989 will match 1988 levels. Speculation is that farm income will fall about 10 percent in 1989. The winter wheat harvest decreased 13 percent from year ago levels. Despite some difficulty in the spring and early summer months with low moisture conditions, corn harvests are expected to be reasonably good. Unfortunately, we do not expect prices to be as high in this harvest season as they were in 1988 because U.S. production levels will be closer to normal.

In summary, the Nebraska economy has had a good first half. The second half may be somewhat slower due to the restraints in the agricultural area. The nonagricultural area should continue to advance. In the first half, Nebraska retail sales rose 8.6 percent over the first half of the previous year. Using a rough 5 percent inflation figure, that gives us a 3.6 percent real gain in retail sales. Second half retail sales may be up 6 percent to 7 percent, assuming again a 5 percent inflation factor. That cuts real Nebraska retail sales gains to 1 percent to 2 percent in real terms.

County of the Month

Sherman



Loup City--County Seat

Size of county: 575 square miles, ranks 55th in the state
Population: 3900 (estimated) in 1988, a change of -8.6 percent from 1980
Median age: 36.6 years in Sherman County, 29.7 years in Nebraska in 1980
Per capita personal income: $12,299 in 1987, ranks 80th in the state
Net taxable retail sales ($000): $11,957 in 1988, a change of +16.8 percent from 1987; $5,839 during January-June 1989, a change of +2.8 percent from the same period one year ago
Number of business and service establishments: 92 in 1986; 75.0 percent had less than five employees
Unemployment rate: 5.2 percent in Sherman County, 3.6 percent in Nebraska for 1987
Nonfarm employment (1988):

	State	Sherman County
Wage & salary workers	688,146	807
	(percent of total)	
Manufacturing	13.8%	3.3
Construction and Mining	3.8	n.a
TCU	6.5	n.a
Retail Trade	18.5	13.5
Wholesale Trade	7.3	11.4
FIRE	7.0	5.6
Services	23.0	n.a
Government	20.1	45.1
Total	100.0%	100.0%

Agriculture:

Number of farms: 576 in 1987, 539 in 1982
Average farm size: 555 acres in 1987
Market value of farm products sold: $30.2 million in 1987 ($52,440 average per farm)

Sources: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, Nebraska Department of Labor, Nebraska Department of Revenue

Merlin W. Erickson

Business in Nebraska

PREPARED BY BUREAU OF BUSINESS RESEARCH
Association for University Business & Economic Research

Business in Nebraska is issued as a public service and mailed free of charge upon request to 200 CBA, University of Nebraska-Lincoln, Lincoln, NE 68588-0406. Copyright 1989 by Bureau of Business Research, University of Nebraska-Lincoln.

October 1989, Volume 45 No. 541

University of Nebraska-Lincoln-- Martin Massengale, *Chancellor*
College of Business Administration--Gary Schwendiman, *Dean*

Bureau of Business Research
F. Charles Lamphear, *Director*
Merlin W. Erickson, *Research Associate*
Margo Young, *Editorial Assistant*
John S. Austin, *Statistical Coordinator*
Jodi Benson, *Staff Secretary*
Barbara Sumsion, *Composing Technician*
Lisa Darlington, *Staff Secretary*
Dave DeFruiter, *Information Systems Coordinator*

The University of Nebraska-Lincoln does not discriminate in its academic, admission, or employment programs and abides by all federal regulations pertaining to same.

Nonprofit Org.
U. S. Postage
PAID
Lincoln, Nebraska
Permit No. 46

CONGRESSIONAL INFO SERVIC270238
SRI BR
4520 EAST-WEST HWY
BETHESDA, MD 20814

U7860-1

Business In Nebraska

November 1989
Vol. 45 No. 542

Prepared by the Bureau of Business Research
200 College of Business Administration
University of Nebraska-Lincoln
Lincoln, NE 68588-0406
402/472-2334

The Uruguay Round and the Nebraska Economy: Part I

Craig R. MacPhee
UNL Professor of Economics

Introduction

According to a recent *Business in Nebraska* article, Nebraska ranked third among the 50 states in exports of feed grains and livestock products. Nebraskans are estimated to spend about one of every four retail dollars on imports.

Despite the importance of international trade, it is difficult for many Nebraskans to obtain information about distant events that may influence the state economy. In Geneva, Switzerland, representatives of the United States government and 125 other nations currently are bargaining about trade regulations in the so-called Uruguay Round of negotiations. The Uruguay Round commenced in Punta del Este on September 20, 1986 and is scheduled to conclude by the end of 1990.

This article summarizes the negotiations over products of particular interest to Nebraska. It also estimates the effects of hypothetical trade liberalization on Nebraska prices. These estimates are not precise forecasts, but they provide a rough benchmark by which to evaluate the actual outcome of the Uruguay Round.

Progress in the Negotiations

The aim of this and other rounds of multilateral negotiations under the auspices of the General Agreement on Tariffs and Trade (GATT) is to reduce import barriers on a reciprocal basis. In order to achieve this broad objective, the negotiators have been divided into 14 groups according to the type of barrier (tariffs, subsidies, etc.) or the type of product (textiles, services, tropical goods, etc.).

The agriculture negotiating group has been the scene of greatest disagreement at the Uruguay Round. At Punta del Este, all parties acknowledged the need "to bring more discipline and predictability to world agricultural trade by correcting and preventing restrictions and distortions including those related to structural surpluses . . ." The United States government and the European Community Commission (EC), however, have disagreed over the means to achieve this end. Thirteen countries in a loose coalition known as the Cairns group are allied with the U.S. position. These countries include such important agricultural producers as Argentina, Australia, Brazil, and Canada.

The U.S. wants elimination of all agricultural subsidies and import restrictions over ten years. The EC, on the other hand, wants a freeze at 1984 levels on government spending to support agricultural prices and some price and production controls in the short term. Afterward, the EC envisages negotiations to reduce support and protection gradually to stabilize international prices.

The dispute over agriculture almost scuttled the negotiations at the mid-term ministerial review of April 1989 in Mon-

State Economic Scoreboard

Change from same month one year ago.
See Review and Outlook on page 8 for more details.

	State	Metro+	Nonmetro
Motor Vehicle Sales (July) Constant $	↓ -3.2%	↓ -2.2%	↓ -4.1%
Nonmotor Vehicle Sales (July) Constant $	↓ -0.1%	↑ 2.4%	↓ -2.7%
Building Activity (July) Constant $	↓ -0.2%	↓ -1.7%	↑ 1.8%
Employment (September)	↓ -0.6%	↓ -0.7%	↓ -0.5%
Unemployment Rate* (September)	↓ 2.9%	↓ 3.0%	↓ 2.8%

+Omaha and Lincoln. *Unemployment is this month's rate, not a percent change from year ago.

treal. The U.S. swayed the EC from its threat to abandon the Uruguay Round by accepting a long-term objective of "substantial progressive reductions in agricultural support and protection."

At a July 1989 meeting, the U.S. proposed that all parties convert their agricultural quotas, variable levies, and other import restrictions to ad valorem tariffs so that protection could be measured by a common base: percent of import price. The EC opposed this plan because variable levies are an integral part of its common agricultural policy. Variable levies are like adjustable tariffs that are raised whenever the import price falls or domestic price support rises.

The EC believes that negotiators should formulate an aggregate measure of support for each party and then bargain over reductions in this measure. The EC proposal applies only to combined support for a few major commodities. The measure would be based on a benchmark international price. The U.S. objects to the EC plan.

In October 1989, the U.S. submitted a detailed proposal to the agriculture negotiating group. It called for staged reductions in price supports over ten years and elimination of export subsidies over five years. The EC called the U.S. proposal a step backward, and Japan termed it impractical. Developing countries criticized the plan's lack of special allowance for developing countries.

No one can predict the outcome of the Uruguay Round, but most observers agree that complete liberalization of agriculture prices is unlikely in the near future. Nevertheless, the forces in favor of unrestricted and unsubsidized trade are inexorable. This makes it worthwhile to consider the implications for the Nebraska economy. Complete multilateral liberalization, while unlikely, still serves as a useful benchmark by which to evaluate the compromises that may be seen in another year.

Price Effects of Liberalization

Several economists have estimated the impact of liberalization on agricultural prices. Most of them use independent estimates of supply and demand elasticities to assess the consequences of hypothetical changes in policy. The elasticities measure the responsiveness of producers and consumers, both at home and abroad, to small changes in subsidies, quotas, tariffs, and support prices. The calculations are complex, because information is dated and incomplete and relationships among commodities and countries must be considered. For instance, if both the grain and livestock sectors were liberalized, livestock producers might find their prices pulled up by higher foreign demand but pushed down by lower feed costs. Similarly, the effects depend on the number and size of the countries that liberalize. A large country such as the U.S. will have a much larger influence on international prices than a smaller one such as Canada.

Two studies that estimate the effects of the Uruguay Round on U.S. producer prices are summarized in Table 1. The producer prices in the table include market support prior to liberalization and cover major Nebraska agricultural products. The support creates a gap between producer prices and the unit values of goods in international trade (border prices). The ratios of these prices represent a common indicator of the degree of protection accorded to domestic producers. For instance, Tyers and Anderson estimate that the U.S. producer price on sugar was 20 percent higher than the price of sugar imports from 1980 to 1982; therefore, the ratio in the table is 1.20. The ratios for 1980-1982 and 1986 are based on actual price data, while the ratio for 1995 is projected. The ratios differ among products and over years because of alterations in support programs, changes in U.S. demand and supply, and variations in international prices.

The second set of estimates in Table 1 explores the impact of hypothetical liberalization on producer prices. Although both studies find that the international prices of all commodities will rise, the impact on U.S. producer prices is mixed. Both studies predict that livestock prices generally will rise, while sugar and wheat prices will fall after multilateral trade liberalization. Roningen and Dixit, however, estimate that corn and soybean prices will fall, while Tyers and Anderson estimate that coarse grain prices will rise.

Only Tyers and Anderson predict the impact of unilateral liberalization on producer prices. They show that, without exception, all U.S. prices would fall, and U.S. prices would fall more if the U.S. government acted alone. No wonder that U.S. Secretary of Agriculture Yeutter repeatedly has stated that the U.S. will not abandon its agricultural supports until other countries dismantle theirs.

Although many Nebraska farmers would be hurt by lower prices, Nebraska food processors and consumers would

Table 1
Agricultural Trade Liberalization Estimates for the United States

	Oilseed (Soybeans)	Wheat	Coarse Grains (Corn)	Ruminant Meat (Beef)	Nonruminant Meat (Pork)	Sugar
	Estimated Producer/Border Price Ratios Without Liberalization					
1980-1982	NA	1.15	1.00	1.10	1.00	1.20
1986	1.11	2.47	1.91	1.12	1.08	4.84
1995	NA	1.30	1.00	1.30	1.00	1.95
	Percent Change in Producer Prices with Multilateral Liberalization					
1980-1982	NA	-5	3	16	7	-20
1986	-7	-44	-33	7	2	-69
1995	NA	-4	3	15	-19	-38
	Percent Change in Producer Prices with Unilateral Liberalization					
1980-1982	NA	-12	-4	-7	-1	-27
1995	NA	-21	-6	-18	-2	-48

Sources: Rod Tyers and Kym Anderson, "Liberalizing OECD Agricultural Policies in the Uruguay Round: Effects on Trade and Welfare," *Journal of Agricultural Economics*, 30, no. 2 (May 1988), Table 4, p. 208 and Vernon Roningen and Praveen Dixit, "Economic Implications of Agricultural Market Reforms in Industrial Market Economies," paper presented at the International Agricultural Trade Research Consortium Symposium, "Bringing Agriculture into the GATT," Annapolis, Maryland, August 19-20, 1988 benefit from lower agricultural prices and lower government costs. The studies estimate that the consumer benefit would have been in the range of $370 to $459 per nonfarm household in terms of 1985 or 1986 expenditures. For each dollar lost by farmers, other consumers would gain $1.15 to $1.38. Clearly, these benefits as well as the benefits of trade liberalization to livestock producers also must be considered in assessing the overall impact of the Uruguay Round on the Nebraska economy.

Limitations of the Analysis

Foremost among the issues raised by these analyses of the Uruguay Round is the question of why the estimates differ. There are many possible reasons, because the analysts use different methods and sources of information. Nevertheless, the main differences appear to stem from the choice of base year; in some years international prices have been high relative to support prices, and in other years they have been low. The Tyers and Anderson analysis, for example, yields results similar to the Roningen and Dixit analysis when the same support and international price data are used. The impact of liberalization on the Nebraska economy will be sensitive to changes in U.S. support policies and in world demand and supply conditions in the near future.

The U.S. situation in 1989 differs from all the scenarios in Table 1. Drought and set-asides have pulled up many international prices, while U.S. support prices have been steady or declining slightly in recent years. Estimates of the support/international price ratios for 1989 appear in Table 2. On the basis of these ratios, the effects of liberalization on producer prices generally would be smaller than that predicted by previous research. Estimates of percentage changes in producer prices under 1989 conditions appear in Table 2.

Traditional support policies are not the only government actions that could influence the outcome. Land set-aside programs could restrict expansion of grain production that otherwise would occur if prices rose. Restructuring of centrally planned economies could enhance their agricultural production, but also could increase their demand for foreign harvests. The estimates in Tables 1 and 2 ignore these important policies.

Table 2
Agricultural Trade Liberalization Estimates for 1989

Sorghum	Soybeans	Wheat	Corn	Beef	Pork	Sugar
Estimated Producer/Border Price Ratios Without Liberalization						
0.97	0.70	1.02	1.13	1.16	1.02	2.00
Percent Change in Producer Prices with Multilateral Liberalization						
1	20	-1	-5	5	1	-35

Source: Author's estimates based on prices for the first half of 1989 reported in USDA, Economic Research Service, *Wheat Situation and Outlook* and Foreign Agricultural Service, *World Sugar and Molasses Situation and Outlook, World Oilseed Situation and Market Highlights, Export Markets for U.S. Grains and Products, and Dairy, Livestock, and Poultry: U.S. Trade and Prospects*

Despite the complexity of the economic models that have been used to generate the estimates of post-Uruguay Round price changes, they still do not consider a number of important side effects. Multilateral liberalization also would affect temperate fruits and vegetables, tropical products from less developed countries, and manufactured products. Liberalization also could cause the exchange rate to depreciate, which would stimulate all export industries and unprotected import-competing industries. Liberalization that lowered the prices of agricultural outputs would reduce the prices of inputs. Current owners of land would suffer a capital loss, for instance, but future farmers would benefit from cheaper land costs. Moreover, as the factors of production were reallocated to more efficient types of employment, national output and consumer welfare would rise considerably higher than these studies estimate.

The side effects of agricultural trade liberalization are almost all positive. First, liberalization would ensure the viability of U.S. agricultural production by mitigating the price effects. If the less developed countries abandoned their restrictions, they probably would increase their demand for U.S. meat and grains. Second, agricultural trade liberalization would provide additional benefits to consumers and nonagricultural industries. Thus, agricultural studies that ignore the side effects give an unduly pessimistic view of the overall economic impact of the Uruguay Round.

There are several technical problems in the studies. The studies assume that agricultural commodities are interchangeable. For instance, grass-fed beef from Australia is not distinguished from the grain-fed beef of the U.S. The elasticities that have been used to calculate the effects of changes in quotas, tariffs, and support prices, have been estimated statistically from historical data. To the extent that historical price changes have been relatively small and to the extent that historical producer and consumer responsiveness have been influenced by past policies, the elasticities probably would not apply to drastic changes such as complete liberalization. Finally, the studies are aggregated nationally—the studies ignore the redistributive effects of liberalization among regions of the country and among types of farms.

Epilogue and Prologue

The value of the estimates presented here does not depend on their accuracy. The limitations of price analysis and uncertainty surrounding the current negotiations in Geneva preclude accurate forecasts of the effects of multilateral trade liberalization. The analysis does provide a systematic way of thinking about the problems and opportunities that will confront the U.S. in the future. If we can develop an understanding of the economic forces shaping our destiny, we will be better prepared to meet the challenges to come. To further that end, next month's *Business in Nebraska* will use price estimates to assess the Uruguay Round's impact on broader measures of Nebraska economic activity such as personal income, retail sales, and employment.

Secondary Effects of Irrigation Under Drought Conditions

F. Charles Lamphear and Merlin W. Erickson

The October *Business in Nebraska* investigated the direct contribution of irrigation during periods of drought. The article simulated two drought scenarios for 1985 conditions: a moderate drought 20 percent below normal precipitation and a substantial drought 40 percent below normal precipitation.

The simulation study shows the prominent role irrigation plays in periods of drought. For example, the state would have lost approximately $1.2 billion in crop output if there had been no irrigation and a substantial drought in 1985.

The $1.2 billion figure represents the direct effects of irrigation on the state's economy. This article focuses on additional irrigation effects on the state's economy, called *indirect effects.*

Added output due to irrigation means added business activity for manufacturing, utilities, transportation, retail and wholesale trade, insurance, and finance, to name a few. Irrigation indirectly supports hundreds of Nebraska businesses.

Irrigation's indirect effect on other businesses was measured using input-output models that identify and quantify in matrix form all the interindustry transactions that occur during an accounting period. This matrix traces the impact of one industry on other industries.

Bureau researchers construct and maintain input-output models of the state's economy. A 1985 state-based model was used in the irrigation study because the base year for the study was 1985. Special adjustments were made in the 1985 model to reflect alterations in production expenses due to the simulated drought conditions. The interindustry relationships contained in the 1985 input-output model had to be recalculated to reflect certain changes in crop production expenses due to the simulated drought conditions.

Figure 1
Net Economic Effects of Irrigation
for Moderate and Substantial Drought Conditions for Nebraska
1985 Prices and 1985 Irrigated Land Base

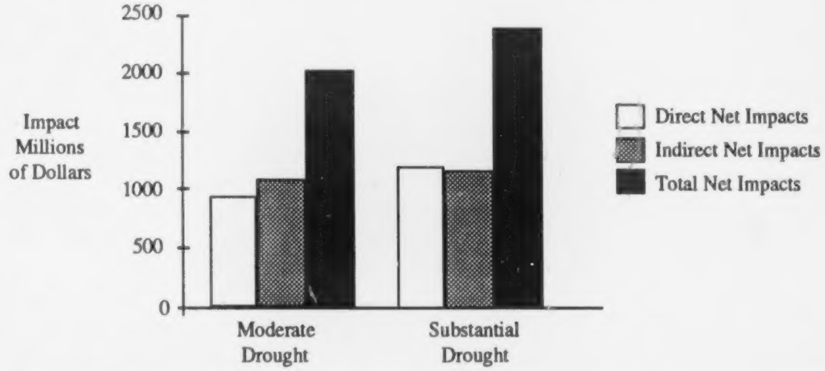


Figure 1 summarizes the direct and indirect effects of irrigation for simulated moderate and substantial drought conditions. The net direct effect for a moderate drought situation is $896.2 million. The net direct effect for a substantial drought is $1.2 billion. These are net direct effects—they represent the difference between the value of crop output from irrigation and the value of crop output under simulated dryland drought conditions for the same land base.

The direct effect triggered additional indirect effects that were calculated from adjusted state input-output models. Figure 1 shows net indirect effects for the moderate and substantial drought situations at approximately $1.04 billion and $1.17 billion respectively. Total net effect is the sum of direct and indirect net effects. Total net effects are approximately $1.93 billion for the moderate drought scenario and $2.38 billion for the substantial drought situation.

Table 1 presents selected industry breakdowns of the estimated $1.2 billion in net indirect economic effects for the substantial drought situation for the state.

The approximate $131 million figure reported in Table 1 for the trade sector represents this sector's mark-up on goods sold. In total retail sales, it represents approximately $1.0 billion. Other figures in Table 1 represent industry gross outputs.

Table 1
($000s)

Industry	Net Indirect Economic Impact
Manufacturing	$191,755
Transportation	$30,279
Utilities	$97,665
Trade*	$130,843
FIRE**	$120,413
Services	$143,115

* This figure represents the trade sector's margin or mark-up on goods sold

** FIRE represents finance, insurance, and real estate

Table 1 shows the distribution of effects across industries. There is also an associated geographic distribution across communities. Although such an investigation was outside the scope of this study, community level effects of irrigation and the long-term effect of irrigation on the state's economy need to be examined. The current study focused on interindustry sales and purchases related directly and indirectly to irrigation during a single accounting period. The study ignored the long-term effects of irrigation on investments and capital growth (for example, growth in the livestock and meat processing industries). Thus, the current study understates the full effect of irrigation on the state's economy. Without further study, however, it can be said that irrigation is a vital segment in the state's economy, especially in agribusiness.

A final article in the irrigation series on sustaining and maintaining an adequate supply of quality water in Nebraska will appear next month. A detailed report of the recent irrigation study is being compiled. The report is expected to be completed by the first of next year. Because copies will be limited, those interested are encouraged to contact the Bureau before the end of the year.

Banking in Nebraska: Part 2
The Savings and Loan Crisis

Andrew Pitcher

This article, the second in a series of three examining trends in Nebraska's banking industry, focuses on Nebraska savings and loans. Savings and loan institutions merit special attention because of the current crisis surrounding the industry.

S&Ls have many of the features of commercial banks, but they have evolved through different processes and have been subject to different regulations. S&Ls are insured through the Federal Savings and Loan Insurance Corporation (FSLIC). Traditionally S&Ls were bound to operate solely in the home mortgage market. Although financial market deregulation has allowed these institutions to diversify their lending activities, savings institutions still account for more than half of the residential loans outstanding in the private sector.

Although there currently exist only 24 savings and loan institutions in Nebraska, the industry operates on a scale comparable to that of commercial banks. As of December 31, 1988, Nebraska S&Ls controlled $12.305 billion in assets. Nebraska commercial banks controlled $17.471 billion over the same period.

Origins of the Crisis

The 1980s have been turbulent times for the S&L industry. It seems unlikely the industry will survive in its present form in the 1990s. The roots of S&L industry problems can be traced to deregulation in the early 1980s. Although deregulation provides a more competitive environment, the transition can create problems. This is particularly true when the economy is undergoing structural change as it was in the early 1980s.

Regulatory Changes

At the beginning of the 1980s a new regulatory environment emerged for S&Ls. The most notable regulatory changes were the gradual elimination of deposit rate ceilings and a relaxation in the restrictions on the lending and borrowing activities of S&Ls. Also, deposit insurance coverage for federally insured S&Ls was increased from $40,000 to $100,000.

The phaseout of deposit rate ceilings had significant implications for savings and loan institutions. S&Ls had enjoyed benefits from the legislated interest rate differential that existed between S&Ls and commercial banks since 1966. The imposition of interest rate ceilings resulted in S&Ls engaging in behavior that was not economically efficient. For example, S&Ls typically competed for deposits on a nonprice basis. S&Ls may have engaged in expense-preference behavior such as higher salaries and more branches. Once interest rate ceilings were removed, it was difficult for many institutions to be competitive.

Economic Environment

S&Ls were ill equipped to handle the changes in the economic environment that occurred in the early 1980s. One of the principles of good financial management is the need to balance maturities of assets and debt or to insure against the risk of interest rate fluctuations through portfolio immunization strategies. This rule is particularly relevant to the management of S&Ls. The core of a typical S&L's business is fixed rate mortgage lending. Although mortgage lending is by nature long term, an S&L's assets are primarily short-term deposits.

The early 1980s were marked by recession. The major impact of the recession on S&Ls was a rise in interest rates coupled with a dramatic decrease in housing construction. In the first six months of 1981, the industry recorded its first semiannual loss since the creation of the Federal Home Loan Bank Board in the 1930s. Combined with these operating losses was a massive drop in deposits. To offset the disintermediation resulting from high interest rates and the development of competing institutions such as money market mutual funds, regulators approved the creation of new financial instruments that would yield higher returns for depositors. The combination of a higher cost of borrowing and increased competition squeezed S&L net margins further. As their profitability declined, S&Ls had a greater incentive to take riskier lending and investments--any losses, in effect, would be underwritten by the FSLIC, whereas profits would accrue directly to the S&L. Because insurance premiums were not related to risk, risky S&Ls therefore were being subsidized by the conservatively managed institutions. Deposit insurance allowed depositors at federally insured S&Ls protection regardless of the risk of the institution's underlying loan portfolio. Risky S&Ls were not subjected to market discipline and had little incentive to restrict risky loans and investments. As many institutions found themselves overextended, profits declined. Many S&Ls were trapped in a vicious circle.

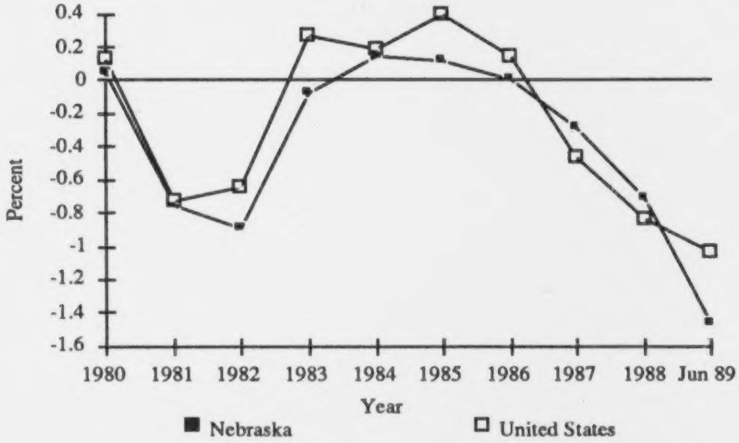
When interest rates began to decline in 1983, many industry observers believed that S&L profitability would be restored. To a certain extent, the outlook improved. Unfortunately, the industry's structural problems had not been addressed. The economic expansion in the 1980s allowed S&Ls to grow at an unprecedented rate. With the growth came virtually unrestrained investment in risky ventures. The fall in oil and commodity prices and the resultant collapse of the economies of states dependent on oil and commodity production, particularly Texas, meant that S&Ls that had overextended their lending and investment activities were driven further into insolvency. By the end of 1986, the FSLIC was technically insolvent.

Fraud

Although fraud has played a role in the S&L crisis, fraud itself is only a symptom. The structure of the industry and the way the industry was regulated allowed fraud to promulgate. The most spectacular manifestation of fraud in the industry was the acquisition of ailing S&Ls by corporations seeking to acquire a bank in order to access cheap financing. The new owners of the S&L could inflate the value of assets to back the loan and invest the proceeds in speculative ventures.

The more common incidence of fraud in the industry was more subtle and manifested itself through poor internal control mechanisms. S&L management could appropriate funds to invest in fanciful real estate ventures that lacked prudent management. The industry was expanding quickly, and managers were eager to make quick profits without doing the necessary financial analysis.

Figure 1
Return on Average Assets, Nebraska and U.S.



Source: Sheshunoff & Co.

Nebraska S&Ls

In March 1989, there were 24 savings and loan institutions operating in Nebraska. Of these, 17 were mutual institutions, owned by members and issuing no capital stock. Nebraska S&Ls are concentrated in the larger metropolitan areas, with nearly 88 percent of Nebraska S&L assets in institutions headquartered in Lincoln or Omaha. Despite the relatively few number of institutions, over 200 S&L branches are located throughout the state.

Loan Portfolio

An important determinant of the economic viability of an S&L is the quality of its loan portfolio. An institution's loan portfolio reflects management decisions on how its funds should be used. Currently, the healthier Nebraska S&Ls tend to be those with a relatively high proportion of home mortgage lending. In contrast, those institutions doing poorly are those with a relatively high proportion of nontraditional lending such as land acquisition and development and nonresidential real estate.

A measure of the quality of an institution's loans is indicated by the number of foreclosures it makes. Mortgage foreclosures by Nebraska S&Ls have increased approximately tenfold from 1978 to 1987. In 1978 U.S. and Nebraska foreclosure rates were nearly equal, about half a percent of total mortgages. In 1987 Nebraska S&Ls made 1,248 mortgage forecloses, representing 1.12 percent of the total number of mortgages. The comparable figure for the United States was 0.74 percent. Furthermore, loan quality is inversely related to capital adequacy, with those institutions suffering from an erosion of capital having poor quality loan portfolios. As of June 30, 1989, repossessed and other real estate assets as a proportion of total asset for Nebraska S&Ls averaged 4.5 percent. For those S&Ls with a positive tangible capital-to-total asset ratio, the proportion averaged only 1.1 percent. In contrast, those S&Ls with a negative tangible capital-to-total asset ratio had a repossessed asset ratio of 8.6 percent.

Profitability

For 1988, federally insured Nebraska S&Ls yielded, on average, -0.71 percent return on average assets (ROA). Although this return was not as low as the national average for the year (-0.84 percent), it represents continuing decline in S&L profitability in Nebraska. The results for the six months ended June 1989 show further deterioration in the profitability of Nebraska S&Ls. The Nebraska average annualized ROA of -1.46 percent exceeds the national figure of -1.03 percent. Figure 1 shows the ROA for Nebraska S&Ls over the period 1980 to June 1989.

It is clear from Figure 1 that Nebraska S&L profitability is closely linked with national trends. The severe downturn in ROA at the beginning of the decade resulted from the regulatory and structural changes mentioned above. By the mid-1980s, the crisis had been averted by several factors. These included the sale or merger of some of the unprofitable institutions, less volatile interest rates, and a period of sustained economic growth. This respite was only temporary, however, as no measures had been taken to address the fundamental weakness of the S&L industry. To examine the factors that led to the deterioration in the economic viability of S&Ls, it is necessary analyze the net interest margin and capital adequacy.

Net Interest Margin

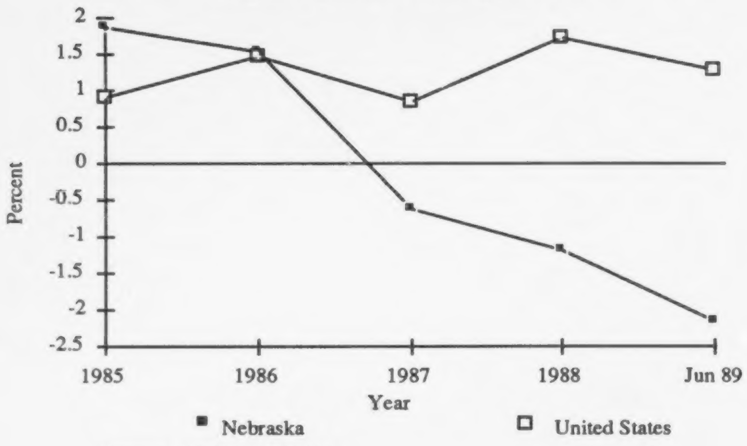
The net interest margin (NIM) is a measure of the extent to which interest income covers interest expense. The higher the net interest margin, the more profitable is the bank's ability to earn income on its loans versus the cost of the funds it borrows from depositors.

Although the net interest margin improved for Nebraska S&Ls between 1984 and 1986, it fell in 1988 as interest expenses rose faster than interest income. The spread probably narrowed because of the general rise in interest rates during 1988. The interest rate rise forced S&Ls to pay higher interest on their deposits; otherwise customers would deposit their funds elsewhere. Interest income did not rise to the same extent, as the main customers of S&Ls are holders of mortgages. S&Ls are unable to increase interest charges quickly. Of the 24 Nebraska S&Ls operating as of June 1989, four experienced a negative net interest margin. That is, their cost of funds exceeded their interest expense, even before operating income was charged.

Capital Adequacy

One of the most significant features of the S&L crisis has been the failure of S&Ls to retain sufficient capital to protect depositors from possible financial difficulties. Deposit insurance provides an incentive to keep capital as low as possible to increase financial leverage (the ability to expand the level of operations through borrowing). The capital adequacy of S&Ls can be measured by the net worth-to-total assets ratio. Unfortunately, the net worth reported by S&Ls is their regulatory net worth. Regulatory net worth disguises an institution's real net worth. Regulatory net worth includes such accounting fictions as net worth certificates (paper issued by the Federal Home Loan Bank Board to increase recorded net worth), appraised equity capital, qualifying subordinated debentures, and deferred losses

Figure 2
Tangible Capital as a Percentage of Assets



Source: Sheshunoff & Co.

on assets that bear below market interest rates.

A better measure of the value of economic net worth is tangible net worth. This measure excludes good will and other intangible assets. Figure 2 shows the ratio of tangible capital to total assets for Nebraska and United States S&Ls in aggregate over the period 1985 to June 1989.

For the first six months of 1989 Nebraska S&Ls had, in aggregate, a ratio of tangible capital to total assets of -2.15 percent. If all Nebraska's S&L were grouped together, the resulting entity would be insolvent (having more liabilities than assets). In contrast, United States S&Ls had, in aggregate, a low, but positive tangible capital-to-total assets ratio.

A closer examination of latest financial results (the six months ending June 1989) for Nebraska S&Ls reveals considerable variation in capital adequacy. In terms of regulatory capital, five of Nebraska's 24 S&Ls had a capital-to-asset ratio of less than zero. When capital is adjusted to the tangible capital definition, 11 S&Ls (or 46 percent) had a negative capital ratio. The lowest tangible capital-to-assets ratio was nearly -62 percent, with the highest at +16 percent. Approximately half the Nebraska S&Ls had a tangible capital to assets ratio between -5 percent to -3 percent.

The S&L Bailout

The Financial Institutions Reform, Recovery, and Enforcement Act (1989) provides some sweeping changes to the S&L industry. Under the S&L bailout plan, it will cost about $166 billion over the next ten years to restructure the nation's savings and loan industry. The bailout will be jointly financed by the taxpayer and the industry, with the taxpayer contributing about three-quarters of the cost. It is the job of a new bureau within the Treasury known as the Office of Thrift Supervision to bring the insolvent S&Ls' tangible capital to zero through a $50 billion cash infusion to the industry. Additional capital must be raised through investors. It will be the job of the FDIC through a new federal agency known as the Resolution Trust Corporation to dispose of the assets of acquired S&Ls.

The key provisions of the Financial Institutions Reform, Recovery, and Enforcement Act (1989) are:

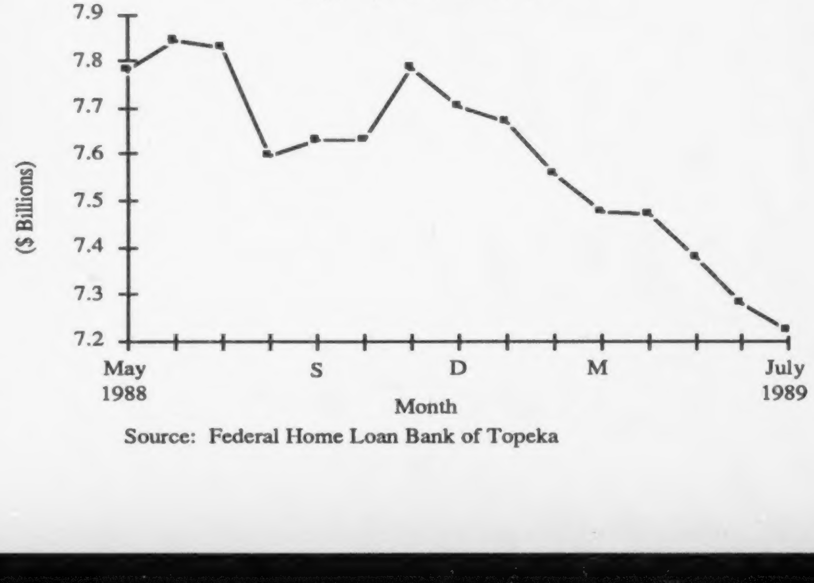
Creation of the Savings Associations Insurance Fund (SAIC) to replace the FSLIC, to be administered by the FDIC

- Abolition of the FSLIC and the Federal Home Loan Bank Board
- Increased insurance premiums from $2.03 per $1000 of deposits to $2.30 per $1000 of deposits by 1991
- Restrictions on purchases of junk bonds
- Require core capital of not less than 3 percent of total assets
- Tangible capital requirement of not less than 1.5 percent of total assets
- Savings institutions must hold at least 70 percent of portfolio assets in mortgage-related investments
- Certain defined investments may not exceed 15 percent of assets
- Easing of bank holding company restrictions
- The Federal Home Loan Banks will be required to make significant annual contributions to the new affordable housing program.

Implications for Nebraska S&Ls

Figure 3 shows the level of deposits at Nebraska S&Ls over recent months. Although part of the decline may be attributable to interest rates that were rising through the spring, it is likely that deposits at Nebraska S&Ls have dropped steadily throughout the current year due to depositor uncertainty about the S&L bailout. The decline in deposits may exacerbate the industry's financial condition if holdings of mortgages and mortgage-backed securities also fall at a similar rate. More recently, S&Ls have engaged in a deliber-

Figure 3
Deposits of Nebraska S&Ls



Source: Federal Home Loan Bank of Topeka ate strategy to shed assets in order to meet the new capital requirements.

The area where the new regulations will have the greatest impact for Nebraska S&Ls is the new capital requirements. Using the results for the six months ended June 1989, only half of the Nebraska S&Ls currently would meet the requirement of a net tangible to asset ratio of 1.5 percent.

The impact of other provisions of the act are more difficult to discern. For example, the increased freedom for bank holding companies to acquire healthy savings institutions and merge their operations into the bank's may provide increased competitive opportunities for Nebraska banking institutions.

Conclusions

Although many necessary steps are being taken to help the S&L industry overcome its difficulties, lingering problems remain. First, the issue of deposit insurance needs to be addressed. Part of the S&L problem was that deposit insurance rates were not tied to the riskiness of an institution's loan portfolio. This means that risky S&Ls were subsidized at the expense of conservatively managed institutions. The new capital standards that are based partly on an institution's asset quality will alleviate this problem. By tying deposit insurance rates with portfolio risk, however, there will be an incentive for risky institutions to reduce their level of risk. Second, there is a need to develop a more coordinated approach to banking deregulation in the future. Institutions that operate in the same markets should be governed by the same regulations. Finally, the restructuring of the S&L industry needs to be handled carefully. S&L assets should be sold in a manner that minimizes any instability to the healthy side of the industry.

Given the current state of the S&L industry, it is inevitable that there will be more S&L closures in the state. After this period of consolidation, a more robust industry should emerge. In the future, it is likely that successful S&Ls will concentrate more on the home mortgage market where many benefit from a competitive advantage.

Review and Outlook

John S. Austin

National Economy

This month marks the start of the eighth year of continued economic expansion. The advance report for third quarter GNP shows a real increase of 2.5 percent at annual rates. That increase was slightly larger than expected. The GNP numbers will be revised in the near future, but major growth areas can be identified.

A major contributor to the jump in GNP was personal consumption, specifically durable goods. Durable goods advanced 15.0 percent, due in large part to fast paced third quarter auto sales. These auto sales were stimulated by large discounts from the factories and advance notice of large list price increases for the 1990 model year vehicles.

Investments in producer structures and durable equipment gained over 5.0 percent at annual rates in the third quarter. Residential investment decreased 4.8 percent.

The government block dropped 2.3 percent. All of the fall was attributed to the federal government. State and local spending increased 2.8 percent. Nonde-

Table I
Income and Earnings in Nebraska, SeasonallyAdjusted at Annual Rates
($ millions)

	1987:III	1987:IV	1988:I	1988:II	1988:III	1988:IV	1989:1	1989:II	% Change 1989:II versus 1988:II
Income									
Total Personal Income	21,473	24,304	23,281	24,214	23,017	24,166	24,976	25,007	3.3
Nonfarm	20,611	21,054	21,312	21,633	21,951	22,507	22,692	23,056	6.6
Farm	862	3,250	1,969	2,582	1,066	1,659	2,284	1,951	-24.4
Earnings by Industry**									
Ag. Services, Forestry, Fisheries	138	149	151	147	144	144	143	147	0.0
Mining	52	57	51	50	49	47	45	50	0.0
Construction	858	882	938	918	887	933	910	894	-2.6
Manufacturing	2,209	2,287	2,350	2,369	2,408	2,438	2,501	2,534	7.0
Nondurable	1,098	1,135	1,149	1,180	1,197	1,206	1,215	1,252	6.1
Durable	1,111	1,152	1,201	1,189	1,211	1,231	1,286	1,282	7.8
TCU***	1,623	1,614	1,613	1,608	1,641	1,602	1,670	1,686	4.9
Wholesale Trade	1,147	1,174	1,211	1,237	1,269	1,295	1,319	1,356	9.6
Retail Trade	1,512	1,512	1,545	1,579	1,606	1,636	1,683	1,693	7.2
FIRE****	1,174	1,211	1,189	1,205	1,220	1,241	1,232	1,241	3.0
Services	3,252	3,370	3,334	3,460	3,586	3,837	3,675	3,786	9.4
Government	2,943	2,996	3,046	3,077	3,046	3,148	3,214	3,268	6.2
Federal, Civilian	459	468	473	476	480	492	508	515	8.2
Military	400	400	406	402	401	403	417	416	3.5
State & Local	2,084	2,128	2,167	2,199	2,166	2,253	2,289	2,337	6.3

** Earnings is the sum of wages and alaries, other labor income, and income earned by sole proprietors
*** Transportation, communication, and utilities
**** Finance, insurance, and real estate
Source: Bureau of Economic Analysis, U.S. Department of Commerce

fense federal spending continued to exhibit a seesaw pattern, with a decrease of 38.7 percent in the advance third quarter numbers.

In net exports, we saw a peculiar phenomenon. Net exports had been stimulating the economy for several quarters. In the advance report, net exports were down $22.9 billion, all of which could be traced to an increase in imports. Advance figures for exports were unchanged. Export data are difficult to collect. On a monthly basis, carryover will average 20 percent, with wide variability. Initial monthly export figures should be viewed with healthy skepticism. Some variability will be eliminated by using quarterly data, as is done in the GNP accounts; however, preliminary export figures are subject to substantial revision.

Although the overall economy continues to expand, the industrial sector has been slowing for several months. Industrial production has grown 2.5 percent per year over the last decade and a half, with some recessions: a major downturn in 1975, a blip in 1980, and another major downturn in 1981-1982. The Industrial Production Index was flat prior to each of the recessions. The latest index figures show a decrease of 0.1 percent in September. Flatness in the index is not a guarantee of a forthcoming downturn--the index showed little growth from mid-1984 to the end of 1986, only to begin a rapid rise at the start of 1987. It is difficult to determine whether the current pause is a harbinger of a future downturn or a pause before further industrial expansion.

The Purchasing Managers Association index increased from the August level of 45.2 percent to 46.0 percent. Although an increase is preferred to a decrease, the association observes that index levels below 50 percent indicate a forthcoming decline. The membership of the Purchasing Managers Association consists of industrial concerns.

On the inflation front, there was good news and bad news in the September data releases. The good news was that the Consumer Price Index had a modest advance of only 0.2 percent in September. That gain followed a 0.0 percent increase the previous month. The Consumer Price Index now stands 4.3 percent above year ago levels (see Table III).

The bad news is the Producer Price Index. After decreasing for three months, the index increased 0.9 percent in September. The rise in the index is principally attributable to two items--increases in energy prices and auto prices. Energy prices accelerated 6.5 percent in September after falling 7.3 percent in August. The auto price index was up 3.8 percent--well beyond a normal seasonal September increase. The auto increase was mostly a list price advance, an inducement used by producers to sell 1989 models. The Producer Price Index overall stood 4.5 percent ahead of a year ago. When food and energy prices are removed from the index, the advance is a more moderate 4.3 percent, which matches the Consumer Price Index gain.

The 1989 model year for automobiles and light trucks was the fifth best on record. The model year runs from October to September. The 1989 figure stood at 15.1 million cars and light trucks. The previous model year totalled 15.4 million units. In order to create the sales levels seen in 1989, producers had to offer $8 billion in discounts. Those discounts averaged $900 per unit sold. With mid-October sales levels slumping, producers have cut output levels in the fourth quarter 10.4 percent. U.S. auto production in Japanese-owned and managed plants will advance 42 percent in the fourth quarter as their relatively new plants continue to expand their operation levels.

September housing starts dropped to a seven year low of 1.263 million units at annual rates. The housing starts were 5.2 percent below August levels. While short-term interest rates have fallen since March, mortgage rates climbed until the

Table II
Employment in Nebraska

	Revised August 1989	Preliminary September 1989	September % Change vs. Year Ago
Place of Work			
Nonfarm	710,839	715,211	3.2
Manufacturing	99,634	99,288	3.2
Durables	48,223	47,830	1.5
Nondurables	51,411	51,458	4.8
Mining	2,021	1,901	18.4
Construction	28,564	27,642	6.2
TCU*	47,879	48,110	5.9
Trade	183,783	182,546	2.2
Wholesale	52,709	52,562	4.2
Retail	131,074	129,984	1.4
FIRE**	49,355	49,065	1.9
Services	167,136	167,374	4.7
Government	132,467	139,285	1.4
Place of Residence			
Civilian Labor Force	825,064	811,012	-0.94
Unemployment Rate	3.1%	2.9%	

*Transportation, Communication, and Utilities
**Finance, Insurance, and Real Estate

Source: Nebraska Department of Labor

Table III
Price Indices

	September 1989	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U* (1982-84 = 100)			
All Items	125.0	4.3	4.9
Commodities	117.3	3.8	4.9
Services	133.4	4.8	4.9
Producer Price Index (1982 = 100)			
Finished Goods	113.5	4.5	5.2
Intermediate Materials	112.4	3.4	5.3
Crude Materials	102.0	5.6	7.2
Ag Prices Received (1977 = 100)			
Nebraska	149	-3.2	8.0
Crops	126	-8.7	19.2
Livestock	164	-0.6	3.1
United States	143	-1.4	8.2
Crops	127	-8.6	11.3
Livestock	158	4.6	6.0

U* = All urban consumers
Source: U.S. Bureau of Labor Statistics

summer months. It may take some time for lower mortgage rates to stimulate housing demand.

Unemployment levels in the U.S. stood at 5.3 percent in September, a mild increase from 5.2 percent in August.

Nebraska Outlook

Table I presents the new personal income figures for the second quarter of 1989. Overall, total personal income is up 3.3 percent versus a year ago. There is a severe dichotomy between the farm and nonfarm sectors. Nonfarm personal income advanced 6.6 percent, while farm income was down 24.4 percent. This drop is not surprising, as the farm income component is volatile. Furthermore, lower agricultural prices (see Table III) have restrained farm income. In the nonfarm personal income sector, agricultural services, mining, and construction were weak. The remaining industries showed gains. Only two of those industries grew less than 4 percent: military and finance, insurance, and real estate (FIRE). Services and wholesale trade gained over 9 percent from year ago levels.

After extended growth since early 1987, retail sales showed signs of a slowdown. Figure II shows that both current dollar and inflation-adjusted retail sales fell in July. The changes in July were substantial. The July 1989 current dollar sales figures are below those of September 1988. Table V shows that July retail sales increased 4.4 percent versus a year ago, but on a year-to-date basis sales increased 8.0 percent through July. The recent fall in the retail trade numbers are being seen in some smaller cities, mostly those under 10,000 population. Those decreases reflect the drop in farm income displayed in Table I.

The labor force data, a count of persons who are actively working, was down 0.7 percent from a year ago in July. That decrease reflects a continuing trend. The job count continues to show advances. Preliminary figures for September show a gain of 3.2 percent from a year ago in nonfarm jobs (a count of positions.)

Table IV
City Business Indicators
July 1989 Percent Change from Year Ago

The State and Its Trading Centers	Employment (1)	Building Activity (2)
NEBRASKA	-0.7	4.8
Alliance	-0.2	-63.8
Beatrice	-0.6	-38.3
Bellevue	-1.7	-33.8
Blair	-1.7	60.8
Broken Bow	0.7	-79.8
Chadron	-0.2	712.5
Columbus	0.2	20.7
Fairbury	0.2	-83.5
Falls City	-0.5	-24.9
Fremont	-1.5	11.8
Grand Island	-1.1	-0.9
Hastings	-1.0	-28.9
Holdrege	0.0	883.5
Kearney	-0.2	-14.2
Lexington	1.1	460.2
Lincoln	-1.0	13.5
McCook	-0.3	-71.0
Nebraska City	-0.1	-9.3
Norfolk	-0.9	48.9
North Platte	-0.6	-39.6
Ogallala	-0.8	-33.0
Omaha	-1.7	2.5
Scottsbluff/Gering	-2.0	71.2
Seward	0.1	-19.3
Sidney	0.8	-46.5
South Sioux City	-2.8	135.6
York	-0.6	-10.8

(1)As a proxy for city employment, total employment (labor force basis) for the county in which a city is located is used

(2)Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes

Sources: Nebraska Department of Labor and reports from private and public agencies

Figure I
City Business Index
July 1989 Percent Change from Year Ago

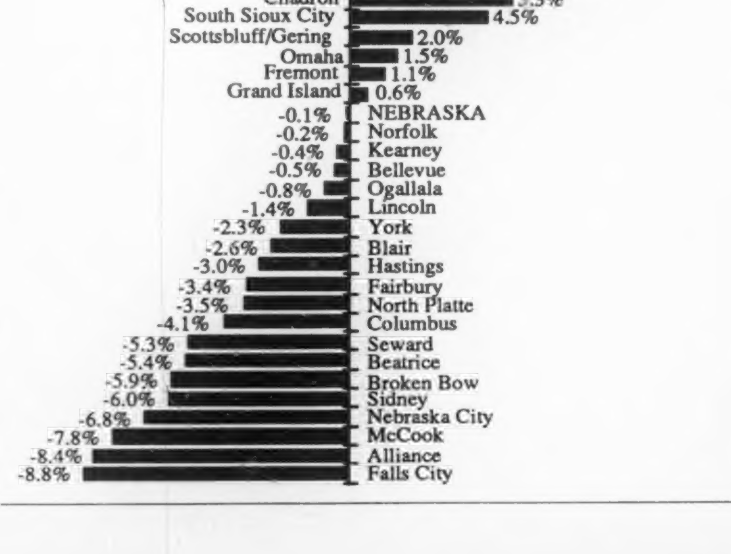
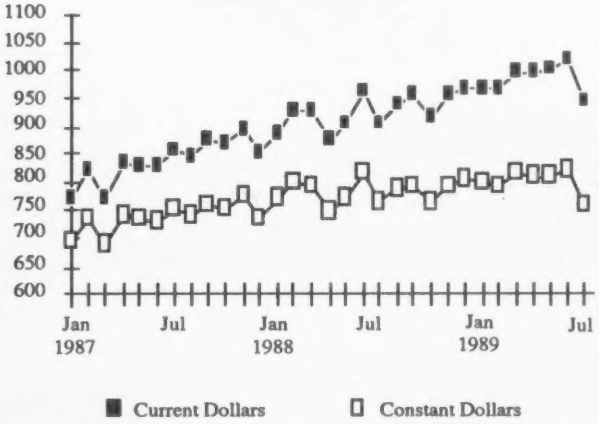


Table V
Net Taxable Retail Sales of Nebraska Regions and Cities

Region Number and City (1)	City Sales (2) July 1989 (000s)	City Sales (2) % Change vs. Year Ago	Region Sales (2) July 1989 (000s)	Region Sales (2) % Change vs. Year Ago	YTD % Change vs. Year Ago
NEBRASKA	$820,773	4.9	$947,529	4.4	8.0
1 Omaha	295,802	9.9	368,702	8.8	9.5
Bellevue	12,452	10.3	*	*	*
Blair	3,947	-4.9	*	*	*
2 Lincoln	107,999	1.2	127,235	1.2	4.7
3 South Sioux City	4,699	8.7	6,560	4.7	3.0
4 Nebraska City	3,203	-10.0	16,871	1.0	2.0
6 Fremont	15,344	7.8	26,997	2.2	5.0
West Point	2,301	13.8	*	*	*
7 Falls City	1,692	-12.2	7,857	-2.7	-0.8
8 Seward	3,583	-5.2	13,239	-1.7	2.5
9 York	5,877	1.4	14,506	0.6	11.2
10 Columbus	13,755	-7.0	24,065	-3.4	5.9
11 Norfolk	17,424	0.8	31,537	2.0	8.2
Wayne	2,203	-3.1	*	*	*
12 Grand Island	31,954	7.6	45,497	6.0	10.5
13 Hastings	14,792	2.9	24,265	2.3	7.7
14 Beatrice	6,566	-1.8	15,952	0.1	1.0
Fairbury	2,792	17.4	*	*	*
15 Kearney	18,659	5.9	26,501	4.3	10.7
16 Lexington	5,589	8.4	15,588	3.2	7.1
17 Holdrege	3,829	-5.3	7,811	-1.9	6.1
18 North Platte	15,590	3.1	19,659	3.7	4.4
19 Ogallala	6,578	8.4	12,409	7.2	12.3
20 McCook	7,109	0.8	10,029	-2.4	3.8
21 Sidney	3,797	-3.0	7,786	-1.5	2.8
Kimball	1,718	-13.2	*	*	*
22 Scottsbluff/Gering	16,973	5.6	23,916	5.5	11.3
23 Alliance	4,932	-3.0	12,817	-5.3	1.7
Chadron	2,516	-6.3	*	*	*
24 O'Neill	4,471	20.9	14,108	12.4	12.1
Valentine	2,540	5.0	*	*	*
25 Hartington	1,328	-1.3	7,591	0.4	2.2
26 Broken Bow	3,225	8.6	11,143	7.4	6.6

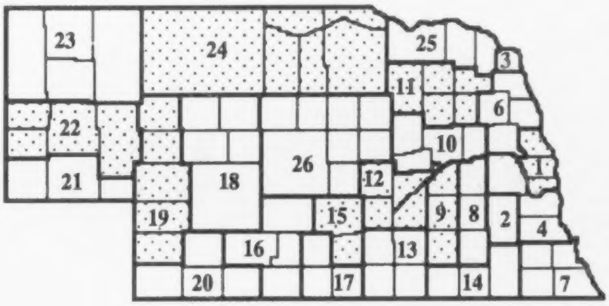
(1) See region map
(2) Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales
* Within an already designated region
Compiled from data provided by the Nebraska Department of Revenue

Figure II
Nebraska Net Taxable Retail Sales (Seasonally Adjusted, $ Millions)



(1) The Consumer Price Index (1982-84 = 100) is used to deflate current dollars into constant dollars

Figure III
Region Sales Pattern
YTD as Percent Change from Year Ago



Shaded areas are those with sales gains above the state average. See Table V for corresponding regions and cities

Christmas Tree Production in Nebraska

There are more than 100 Christmas tree growers in Nebraska. Most of them are members of the Nebraska Christmas Tree Growers Association. These producers have about 50,000 trees for sale annually, although the number varies from year to year. During the holiday season, 20,000 to 25,000 trees are sold.

The total market for Christmas trees in Nebraska is estimated at 450,000 to 500,000 trees from all sources. Cut trees are imported from several states to meet this demand.

Nebraska growers plant about 150,000 trees per year. The age of these trees varies when harvested; however, most of the Christmas tree harvest occurs at seven years of age. This means that about one million potential Christmas trees are growing in the state.

A list of Nebraska growers is available at local County Extension Service and Natural Resource District offices.

Merlin W. Erickson

Business in Nebraska Readership Survey Now Being Conducted

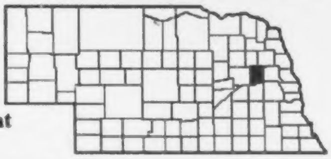
The Bureau of Business Research is conducting a survey of *Business in Nebraska* readers to determine what kinds of articles and information to include in future issues. The survey form was contained in the October edition.

Our thanks to all of you who completed questionnaires. Your comments were useful and helped us to gain a better perspective of what material you need.

For the rest of you, please complete the survey and return it as soon as possible--we hope to compile the responses by the end of the year . . . or give us a call--we're always happy to hear your thoughts about ways to better serve the people of Nebraska.

County of the Month

Colfax



Schuyler--County Seat

Size of county: 415 square miles, ranks 86th in the state

Population: 9,200 (estimated) in 1988, a change of -7.2 percent from 1980

Median age: 34.0 years in Colfax County, 29.7 years in Nebraska in 1980

Per capita personal income: $13,048 in 1987, ranks 70th in the state

Net taxable retail sales ($000): $39,533 in 1988, a change of +12.3 percent from 1987; $23,213 during January-July 1989, a change of +3.8 percent from the same period one year ago

Number of business and service establishments: 251 in 1986; 66.9 percent had less than five employees

Unemployment rate: 2.7 percent in Colfax County, 3.6 percent in Nebraska for 1988

Nonfarm employment (1988):

	State	**Colfax County**
Wage & salary workers	688,146	3,469
	(percent of total)	
Manufacturing	13.8%	40.9%
Construction and Mining	3.8	3.5
TCU	6.5	2.3
Retail Trade	18.5	14.3
Wholesale Trade	7.3	8.0
FIRE	7.0	3.1
Services	23.0	12.6
Government	20.1	15.3
Total	100.0%	100.0%

Agriculture:

Number of farms: 778 in 1987, 779 in 1982

Average farm size: 298 acres in 1987

Market value of farm products sold: $127.8 million in 1987 ($164,230 average per farm)

Sources: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, Nebraska Department of Labor, Nebraska Department of Revenue

Merlin W. Erickson

Business in Nebraska

PREPARED BY BUREAU OF BUSINESS RESEARCH
Association for University Business & Economic Research

Business in Nebraska is issued as a public service and mailed free of charge upon request to 200 CBA, University of Nebraska-Lincoln, Lincoln, NE 68588-0406. Copyright 1989 by Bureau of Business Research, University of Nebraska-Lincoln.

November 1989, Volume 45 No. 542

University of Nebraska-Lincoln-- Martin Massengale, *Chancellor*
College of Business Administration--Gary Schwendiman, *Dean*

Bureau of Business Research
F. Charles Lamphear, *Director*
Merlin W. Erickson, *Research Associate*
Margo Young, *Editorial Assistant*
John S. Austin, *Statistical Coordinator*

The University of Nebraska-Lincoln does not discriminate in its academic, admission, or employment programs and abides by all federal regulations pertaining to same.

Nonprofit Org.
U. S. Postage
PAID
Lincoln, Nebraska
Permit No. 46

CONGRESSIONAL INFO SERVIC270238
SRI BR
4520 EAST-WEST HWY
BETHESDA, MD 20814

U7860-1

Business In Nebraska

December 1989
Vol. 45 No. 543

Prepared by the Bureau of Business Research
200 College of Business Administration
University of Nebraska-Lincoln
Lincoln, NE 68588-0406
402/472-2334

The Uruguay Round and the Nebraska Economy: Part II

Craig R. MacPhee, Professor of Economics

Last month's *Business in Nebraska* presented estimates of the price changes that would follow hypothetical liberalization of trade in agricultural products. Despite the uncertainties surrounding the Uruguay Round and other agricultural market conditions, it is nevertheless worthwhile to consider the effects of trade liberalization. Estimates of the impact on prices, incomes, and employment, although not accurate predictions of the future, provide a systematic way of evaluating the U.S. situation.

The estimates last month consider liberalization effects in isolation and ignore other important changes in agricultural markets. Alterations in climate, soil and water depletion, technological advances, new set-aside policies, variance in purchasing by socialist and developing countries, and macroeconomic variables such as interest rates and exchange rates easily could overwhelm the effects of liberalization in coming years.

Liberalization itself is problematic. The U.S. has called for elimination of export subsidies, import restrictions, and other supports for domestic prices over ten years. There has been no meaningful bargaining to date in the agriculture negotiating group meetings of the General Agreement on Tariffs and Trade (GATT). The Director General of GATT characterized the activities of participants in the Uruguay Round as "grand-standing." Insiders predict that the self-imposed negotiating deadline of December 1990 must be extended if the Uruguay Round is to conclude successfully.

Price Changes in Review

International prices of all important Nebraska agricultural products would rise as a result of liberalization, but the impact on domestic support prices would be mixed. Based on 1986-1987 conditions, Roningen and Dixit predict that only beef and pork prices would rise. MacPhee estimates for 1989 show that only corn, sugar, and wheat prices would fall. Because the results are sensitive to market conditions such as drought and agricultural policies at home and abroad, further analysis will utilize both sets of estimates. The reader must judge whether the future more closely will approximate 1986-1987 or 1989.

The price estimates show the total effect of liberalization, rather than the annual changes that would be more likely to occur as the staged reductions in import restrictions, export subsidies, and domestic price supports were removed gradually over a ten year period. Because most Nebraska economic variables are measured on an annual basis, it is more useful to estimate the impact of annual price changes. The two price scenarios for major Nebraska ag products are shown in column (a) of Table 1.

State Economic Scoreboard

Change from same month one year ago.
See Review and Outlook on page 8 for more details.

	State	Metro+	Nonmetro
Motor Vehicle Sales (August) Constant $	↑ 6.7%	↑ 11.1%	↑ 3.0%
Nonmotor Vehicle Sales (August) Constant $	↑ 0.7%	↑ 1.1%	↑ 0.3%
Building Activity (August) Constant $	↑ 0.1%	↓ -1.4%	↑ 2.1%
Employment (October)	↓ -0.5%	↓ 0.0%	↓ -1.0%
Unemployment Rate* (October)	↓ 2.7%	↓ 2.8%	↓ 2.7%

+Omaha and Lincoln. *Unemployment is this month's rate, not a percent change from year ago.

Table 1
Annual Changes in Prices, Nebraska Production, and the Values of Farm Output and Income After Agricultural Trade Liberalization

			Change in Gross Value of Nebraska Farm Income				Change in Net Farm Income	
			(percent)		($ millions)		($ millions)	
	Price Change (percent) (a)	Production Change (percent) (b)	Without Production Change (c)	With Production Change (d)	Without Production Change (e)	With Production Change (f)	Without Production Change (g)	With Production Change (h)
Under 1986-1987 Domestic and International Market Conditions:								
Beef	0.7	0.4	0.7	1.1	33.7	53.0	33.7	38.6
Corn	-3.2	-0.4	-3.2	-3.5	-69.9	-76.4	-69.9	-74.2
Pork	0.5	0.0	0.2	0.5	3.7	3.7	3.7	3.7
Sorghum	-3.7	-0.4	-3.7	-3.9	-10.4	-10.9	-10.4	-10.6
Soybeans	-1.2	0.2	-0.7	-1.0	-7.1	-5.9	-7.1	-6.2
Sugar	-6.9	-4.2	-6.9	-8.2	-3.5	-4.1	-3.5	-3.6
Wheat	-4.4	-0.6	-4.4	-5.0	-14.0	-16.0	-14.0	-15.5
Under 1989 Domestic and International Market Conditions:								
Beef	0.5	0.30	0.5	0.8	24.1	38.6	24.1	28.4
Corn	-0.5	-0.4	-0.5	-0.9	-10.9	-19.7	-10.9	-17.5
Pork	0.1	-0.0	0.1	0.1	0.7	0.7	0.7	8.1
Sorghum	0.1	-0.1	0.1	0.0	0.3	0.0	0.3	0.0
Soybeans	2.0	1.7	2.0	4.0	11.8	23.6	11.8	21.2
Sugar	-3.5	-1.7	-3.5	-4.6	-1.8	-2.3	-1.8	-2.1
Wheat	-0.1	0.2	-0.1	0.2	-0.3	-0.6	-0.3	-0.4

(a) See Vernon O. Roningen and Praveen M. Dixit, *Economic Implications of Agricultural Policy Reforms in Industrial Market Economies*, United States Department of Agriculture, Economic Research Service, Agriculture and Trade Analysis Division, Staff Report No. AGES 89-36, (August 1989); and Craig R. MacPhee, "The Uruguay Round and the Nebraska Economy: Part I," *Business in Nebraska*, 45, no. 542 (November 1989), pp 1-3. Changes are expressed as a percent of the base support price

(b) See Roningen and Dixit for 1986-1987 and for elasticities used to calculate the results for the 1989 case

(c) If production does not change, then the percentage change in gross farm value of output equals the percentage change in price

(d) Percentage changes in gross farm value equals the sum of columns (a) + (b) + (a)(b)

(e) and (f) The product of columns (c) and (d) and 1988 gross farm values of production

(g) and (h) See text for computation method

Production Changes

How responsive is Nebraska farm output to price changes? Roningen and Dixit surveyed national statistical studies for elasticity estimates. The elasticities reveal the percent change in production in response to each one percent change in price. For example, they conclude that a one percent increase in the prices of sorghum, soybeans, or wheat would lead to 0.6 percent increase in production. Their elasticities were 0.5 for corn and sugar, 0.65 for beef, and 1.0 for pork.

These elasticities are applicable when only one price changes, but across-the-board liberalization changes many prices. To account for the other changes, other elasticities are necessary. Roningen and Dixit conclude that a one percent fall in the price of corn would raise pork production by 0.27 percent and increase wheat production by 0.25 percent. The relevant elasticities from Roningen and Dixit were used to calculate column (b) in Table 1.

Are national estimates of elasticities applicable to Nebraska production? Azzam, Yanagida, and Linsenmeyer estimate production equations for corn, cattle, and hogs from which the following elasticities could be derived: corn 0.0, cattle 1.05, and hogs 0.33.[1] With the exception of cattle, these elasticities are somewhat lower than those of Roningen and Dixit. This implies that Nebraska corn and hog farmers are less responsive to price changes than other farmers in the United States. Because there is no complete set of elasticities for Nebraska, however, the Roningen and Dixit estimates are retained. An alternative assumption of zero elasticities also is employed. Zero elasticities imply that Nebraska farmers make no change in production in response to a price change.

Changes in the Value of Farm Production

The value of crops and livestock produced by Nebraska farmers equals the product of price and quantity. Therefore, the foregoing percentage changes can be used to determine the changes in the gross value of output. Estimates in percentage terms for zero elasticities and for Roningen and Dixit elasticities are shown in columns (c) and (d) of Table 1.

All estimates show that the total value of Nebraska output of beef and pork would rise while that of sugar and corn would fall. In general, the values would fall more or rise less under the 1986-1987 scenario, because in those years international prices were far below domestic support prices. Under the conditions prevailing in 1989, the changes in the value of production are a fraction of one percent for all products except sugar and soybeans. The scenarios differ the most for soybeans, because international prices for that commodity are much higher in 1989 than in 1986-1987.

In order to estimate the impact of the Uruguay Round on the total value of farm production in Nebraska, the percentage changes in Table 1 have been applied to estimates of gross farm receipts by product for 1988. Direct government payments and inventory accumulation have been added to cash receipts; payments such as conservation bonuses were allocated to each crop on a pro rata basis. The results in columns (e) and (f) of Table 1 show that corn production is the biggest loser, falling $10 million to $76 million in value per year, depending on the scenario. Beef production is the largest gainer, rising $24 million to $53 million in value each year. Overall, the value of the seven agricultural products would fall $56 million to $67 million under 1986-1987 conditions, but they would rise $24 million to $42 million under 1989 conditions. These numbers suggest that liberalization would make the value of Nebraska farm output sensitive to variations in world prices.

Changes in Net Farm Income

To assess the impact of agricultural liberalization on the Nebraska economy, the analysis in this article uses relationships derived from the Nebraska econometric model developed by Professor James R. Schmidt of UNL. This model approximates the behavior of net income variables for the state. This means that net farm income changes also must be estimated. Net farm income is defined as the sum of labor earnings and proprietor earnings. The value of farm output, including direct government payments and imputed home rent and consumption, is reduced by all expenses except labor in order to calculate net farm income.

Estimation of the change in net farm income from liberalization also requires calculation of the change in expenses that vary with farm production. An assumption is made that variable costs include all expenses except rent, interest, depreciation, and property taxes. If land prices and rents change following liberalization, the impact on the current net income of farmers would be smaller than estimated.

On the basis of USDA data for Nebraska, it is estimated that variable costs account for 25 percent of crop values and 75 percent of livestock production values.[2] It is assumed that these expenses vary proportionately with output. For example, a one percent drop in livestock production is assumed to reduce variable costs by 0.75 percent. In the case of no alteration in production, the change in net and gross incomes are equal. Estimates appear in columns (g) and (h) of Table 1.

Aggregate Effects on the Nebraska Economy

The net income changes for the seven major Nebraska farm products are summarized in column (a) of Table 2. Although these changes look substantial in dollar terms, they range only from -3.6 percent to +1.6 percent of 1988 Nebraska net farm income. Because the analysis refers to staged liberalization, the changes would continue for ten years. Coefficients from the Nebraska econometric model predict that these changes in farm income would alter total personal income in the state more in dollar terms because of a multiplier effect. Nevertheless, the changes in column (b) of Table 2 are also relatively small, ranging from -0.5 percent to +0.25 percent under 1986-1987 and 1989 conditions. Similarly small changes would be experienced each year for retail sales and employment.

Can Nebraska weather the ag liberalization storm? Recent history suggests that it can. During the 1980s, average year-to-year variationsexceeded $400 million in net farm income and $1.1 billion in personal income, several times the maximum annual impact of the Uruguay Round.

Income effects on farmers and their suppliers are not the end of the story. Roningen and Dixit estimate that the consumer and government savings from liberalization would amount to $150 per capita spread over ten years. These savings translate into a benefit for Nebraska of $24 million per year, which would lower the initial net real income loss to about $44 million in the 1986-1987 scenario. Under the 1989 scenario, consumer prices would rise, costing Nebraska households about $3.3 million more per year. Liberalization of trade in services and industrial goods in the Uruguay Round could benefit other Nebraska exporters and consumers.

Conclusion

The hypothetical analysis in this article is encumbered by many assumptions—the numbers can make no pretense of accurately describing Nebraska's future. Nevertheless, they do reveal rough orders of magnitude for what Nebraskans may expect from complete agricultural trade liberalization. They suggest that the impact would be relatively small in comparison to recent historical experience. They also imply that the impact would differ markedly under different international and domestic agricultural conditions.

If government wants to insulate farmers from this potential instability in net farm income, it could employ policies that would compensate farmers without altering prices. Government payments that are decoupled from production levels would be one policy choice, although a more palatable alternative may be the production entitlement guarantee (PEG). This so-called PEG proposal would set the quantity of output eligible for subsidy at less than liberalized production levels. No incentive to expand production and depress market prices would exist with the PEG, but subsidies per unit could be adjusted to compensate farmers for any adverse impact of trade liberalization.[3]

Endnotes

1. Azzeddine M. Azzam, John F. Yanagida and Dean Linsenmeyer, "A Linked Econometric Model of the Livestock-Feed Sectors in Nebraska and the Rest of the United States," *North Central Journal of Agricultural Economics*, 9, no. 2 (July 1987).
2. United States Department of Agriculture, Economic Research Service, Economic Indicators of the Farm Sector: State Financial Summary, 1988, ECIFS 8-2.
3. For more information on the PEG, see Mark Drabenstott, Alan Barkema, and David Heeneberry, "Agriculture and the GATT: The Link to U.S. Farm Policy," Federal Reserve Bank of Kansas City *Economic Review* (May 1989), pp. 3-24.

Table 2
Annual Changes in Nebraska Economic Activity After Agricultural Trade Liberalization
($ millions and number of employees)

	Net Farm Income Change (a)	Personal Income Change (b)	Retail Sales Change (c)	Nonagricultural Employment Change (d)	Agricultural Employment Change (e)
	Under 1986-1987 Domestic and International Market Conditions.				
Without production change	-67.4	-128.1	-45.7	-748	-47
With production change	-67.8	-128.8	-45.9	-752	-48
	Under 1989 Domestic and International Market Conditions.				
Without production change	24.0	45.6	16.3	266	17
With production change	31.3	59.5	21.2	183	22

Irrigation and Related Issues

Edited by:
F. Charles Lamphear, Director
Merlin W. Erickson, Research Associate
Bureau of Business Research

Contributors:
David Aiken, UNL Department of Agricultural Economics
Dean Eisenhauer, UNL Department of Agricultural Engineering
DeLynn Hay, UNL Department of Agricultural Engineering
Roy Spalding, UNL Water Center

Nebraska's abundant water supply and semiarid conditions are main historical reasons for the state's impressive growth in irrigated agriculture. Irrigated agriculture in Nebraska has made the state one of the nation's leading producers of agricultural products. In 1985 Nebraska ranked third behind Illinois and Iowa in the production of corn for grain. In 1985 over 80 percent (or 715 million bushels of corn) was produced on 5.1 million acres of irrigated land in Nebraska, representing 27 percent of the state's total land devoted to crop production. In that same year, cash receipts from all livestock marketing totaled over $4.1 billion. Irrigation also has been a major contributor to the growth of livestock production in Nebraska.

The economic future of many Nebraska communities, especially those located in the central and western parts of the state, largely depends on irrigated agriculture. Earlier articles in this publication reported the economic importance of irrigation to the state's economy. The net contribution or net economic impact of irrigated agriculture to the state's economy exceeds $1.3 billion annually. A substantial portion of this impact represents business revenues. These revenues would vanish with the loss of irrigated agriculture. It is likely that a number of communities in central and western Nebraska would disappear in the long run if there were no irrigated agriculture.

Major challenges facing Nebraska as the state moves into the 21st century are to limit groundwater depletion, to protect the quality of groundwater, and to resolve possible conflicts between water development projects and the maintenance of instream flows for fish and wildlife.

This final article examines some of the issues surrounding these challenges . . . issues such as contamination, domestic use, conservation, and general water policy.

The material presented here draws on the work of several notable scientists and water experts. These individuals include Professor David Aiken of the UNL Department of Agricultural Economics, a noted authority on water policy and water law; Professor Dean Eisenhauer from the UNL Department of Agricultural Engineering, an expert in water conservation; Professor DeLynn Hay also from the UNL Department of Agricultural Engineering, a specialist on domestic water use; and Professor Roy Spalding, Associate Director of the UNL Water Center, who is an expert on water contamination.

Contaminants

Contaminants can be classified as any physical, chemical, biological, or radiological substance or matter in water. Because water is an excellent solvent, most of the materials that it touches during the natural processes of precipitation, runoff, percolation, and storage contribute to contamination.

Many of the major water quality problems currently faced in Nebraska result from human activities such as agriculture, waste disposal, industrial operations, chemical storage, and well location construction. Some of today's problems, however, result from activities that occurred many years ago.

Contaminants of primary importance in Nebraska water are bacteria, nitrates, radioactive chemicals, selenium, sulfate, organic chemicals such as industrial solvents and pesticides, and others. Two agricultural contaminants receiving particular attention in the press are nitrates and pesticides.

A 1974 study of water quality in 511 wells in the central Platte region of Nebraska (covering parts of Custer, Dawson, Buffalo, Hall, and Merrick counties) indicated the presence of large areas where nitrate-nitrogen levels in the groundwater exceeded the ten parts per million maximum contaminant level (MCL) set by the U.S. Environmental Protection Agency (EPA). The 1974 study showed that groundwater contamination in the central Platte region was confined to the area east of Kearney.

In 1984, 78 percent of the 511 wells sampled in 1984 were resampled for nitrate presence. In general, there were dramatic increases in the spatial distribution of nitrates. Nitrate-contaminated groundwater no longer was limited to the area east of Kearney. The areal contamination east of Kearney also had increased. By 1984, the resampled wells showed that more than 500,000 acres of land in the central Platte region had groundwater with nitrate-nitrogen concentrations in excess of the ten parts per million MCL set by EPA.

Although the central Platte region is the largest and most intensely studied nonpoint, nitrate-contaminated groundwater area in the United States, it is not the only region in Nebraska contaminated by nonpoint sources of nitrate. Approximately 180 square miles of northern Holt County have nitrate-contaminated groundwater.

Groundwater in the central Platte region also has been analyzed for pesticide contamination. A 1978 analysis of water samples from wells in the region indicated the presence of atrazine. For a large majority of the groundwater samples, the concentration of atrazine was greater than 0.02 µg/1. Alachlor was the only other pesticide detected in the groundwater of the central Platte region, but its presence was less frequent than that of atrazine.

From 1979 through 1984, several plots were selected in Buffalo, Hall, and Merrick counties in the central Platte region to demonstrate management practices to local farmers that reduce nitrate leaching without sacrificing crop yields. Using these improved management practices may slow contamination from agricultural chemical use.

Domestic Water Use

Approximately 80 percent of Nebraska's population depends on public water supplies for their domestic water supply.

The Nebraska Department of Health, the state agency administering the Nebraska Safe Drinking Water Act, divides public water systems into community and noncommunity systems. The Safe Drinking Water Act regulates any water system that services more than 25 persons daily or has more than 15 service connections.

Nebraska currently has 674 community water systems; 464 are municipal systems, and the remaining 210 systems include rural water districts, subdivisions, sanitary and improvement districts, mobile home parks, and similar groups. There are 467 public water supplies classified as noncommunity, transient systems. This classification includes rest stops and highway restaurants with their own water supply. The category of nontransient, noncommunity public water systems contains 285 systems and includes schools and industrial facilities.

Nebraska communities depend almost entirely on groundwater as the source of water supply. It has been estimated by the U.S. Geological Survey that 82 percent of Nebraska's population receives water from groundwater supplies. The 1985 estimates indicated that groundwater provided 84.1 percent of the total public water supply and 89 percent of domestic deliveries from public supplies. Essentially all of the self-supplied domestic use in Nebraska is from groundwater.

Although Nebraska has an abundant groundwater supply, that supply is not distributed uniformly. As a result, many communities have had problems developing reliable sources of groundwater. Only five water systems divert surface water for part or all of their supply. These systems are Blair, Crawford, Beaver Lake Home Owners Association, the Cedar-Knox Rural Water District, and the Metropolitan Utilities District which serves Omaha. Surface water must be treated in order to deliver safe, potable water to the consumer. This treatment results in increased costs, but delivering treated surface water is generally comparable in cost to delivering treated groundwater.

Many of the current problems faced by both community water systems and individuals with private wells are related to water quality.

Contaminants in water can be classified as those that adversely affect human health and those that adversely affect the aesthetic and economic value of water. As noted earlier, contaminants of primary importance in Nebraska water are bacteria, nitrate, radioactive chemicals, selenium, iron, manganese, sulfate, and organic chemicals such as industrial solvents and pesticides. The Safe Drinking Water Act has expanded the number of contaminants that public water supplies must monitor. This expanded monitoring helps to insure a safe water supply, but adds considerable economic cost to the product. Public water supply systems are going to face increasing economic and social problems in managing their systems in order to meet the water quality requirements of the Safe Drinking Water Act.

Although Nebraska has abundant water supplies, many communities will face problems in the future providing adequate, good quality water. Communities depend economically on many of the same sectors such as agriculture and industry with which they must compete for water. This competition will become more severe when a community must seek new supplies to address quantity or quality problems.

Some studies have shown that community water quantity problems relate to seasonal lowering of groundwater levels caused by irrigation withdrawals and diminishing flows in rivers and streams that recharge aquifers used as sources for municipal supplies. Irrigation pumping around a rural community can produce a gradual lowering of the water level due to mining of the groundwater and, in some cases, larger temporary declines during the irrigation season. Water management in these situations must consider carefully the needs of both the community and agriculture.

Much of the state's population is served by aquifers that are recharged by adjacent rivers or streams. For example, the well fields of Grand Island, Fremont, Lincoln, and Omaha induce recharge directly from the Platte River. Groundwater storage is sufficient to maintain municipal withdrawals during occasional periods of low flows in the Platte River, as long as there are sufficient flows to recharge the aquifer during the remainder of the year.

The communities withdrawing water from the aquifer's associated streams are concerned about the impact of additional upstream withdrawals. These communities are interested in being able to determine the minimum stream flows needed for supplying existing well fields and sites that may be used for future development. New legislation would be required in order to provide and maintain such minimum instream flows. With recent reports about pesticides in surface waters, questions also are being raised about the impact of the quality of the recharging stream on the aquifers being used for public water supplies.

Water Conservation

Nebraska has about 8 million acres of irrigated cropland. Approximately 10 million acre-feet of water, mostly groundwater, are used annually to irrigate this area. About 94 percent of the total groundwater withdrawn in the state is used for irrigation. In addition, about 100,000 acre-feet of water are used for turf grass irrigation to enhance urban and residential environments. Water is a limiting factor to production on about 12 million acres of rain-fed cropland in the state. Drought conditions always exemplify the need for adopting water conservation practices for more efficient crop production and for maintaining water supplies.

Groundwater users are faced with higher energy costs for lifting water, regional declines in supply, and agricultural chemical contamination. A significant portion of Nebraska's precipitation becomes runoff and is lost for crop use. Runoff also causes soil erosion.

Integrated water management (IWM) can provide efficient and wise use of the state's available water resources and, at the same time, provide protection for the quality of water. IWM provides a way to integrate irrigation, tillage, cropping, pest control, and structural practices into an economically efficient management system for conserving water.

Research and demonstration projects recently conducted in Hall, Buffalo, Holt, and Antelope counties show that from 8 percent to 11 percent of the water applied for irrigated crop production can be saved using scientifically based irrigation scheduling methods. In addition, another 15 percent potentially could be saved by improvements in surface irrigation efficiency that would reduce runoff and deep percolation of water below the crop root zone.

Irrigation scheduling methods are based on either soil moisture measurement, estimation of crop water use using real time weather information and measurement of rainfall and irrigation applications, stage of crop development, or measurement of plant water stress. Stage of growth scheduling is a relatively simple procedure and takes advantage of knowledge about the sensitivity of the crop to moisture stress in each growth stage. It is applied best on deep medium-to-fine textured soils. Modern stage of growth methods adjust the irrigation schedule in accordance to rainfall.

Plant water stress methods integrate many factors that occur simultaneously. Plant stress is dependent not only on soil moisture conditions, but also on weather factors (temperature, wind, etc.). One relatively new plant water stress method is based on plant leaf temperature. Infrared thermometers can be used for this measurement. Although this technology shows promise, procedures for application to an entire field need to be developed and refined.

The crop water use method is gaining in popularity due to the relatively easy access to this information through the news media. A statewide automated weather station network provides the weather data needed to calculate water use through the state. This information is used in a checkbook procedure where crop water use is viewed as a withdrawal from the soil moisture account and irrigation and rainfall are viewed as deposits from the account.

Accurate measurement or estimation of irrigation and rainfall is important to make the method work satisfactorily. Knowledge of the irrigation system efficiency also is needed. As a result, the procedure is easier to apply with sprinkler systems (center pivots, etc.) than with surface irrigation methods (gated pipe and siphon tubes).

Soil moisture measurement methods have existed a long time. These methods include soil probing (then estimating soil moisture by its feel and appearance), electrical resistance blocks, and tensiometers. Due to its simplicity and relatively low cost, the soil probe method is used most commonly. Electrical resistance blocks are best applied on medium-to-fine textured soils, while tensiometers are best applied on coarser textured soils.

Approximately 50 percent of Nebraska's irrigated area is irrigated with surface methods, while sprinklers are used on the other half. Surface irrigation efficiency can be improved using the following technology:

1. Tailwater reuse to manage runoff water
2. Precision land leveling (laser control)
3. Surge flow irrigation (intermittent water application using semi-automatic control valves)
4. Irrigating alternate furrows rather than every furrow.

There are also methods available for making center pivot irrigation more efficient. Any practice that results in reduced runoff improves efficiency. Tillage practices that reduce runoff include conservation tillage (leaving crop residues on the soil surface) and interrow tillage practices (such as subsoiling after the last crop cultivation and forming microbasins between crop rows). Another method for increasing sprinkler efficiency is to apply nozzle/sprinkler packages that reduce wind drift.

There also are opportunities for water conservation in rain-fed agriculture. The objectives are to reduce evaporation from the soil surface and to reduce runoff. Tillage practices have a large impact. Conservation tillage practices such as no-till and ridge plant can reduce runoff as well as reduce evaporation by leaving crop residues on the soil surface. These residues act as a mulch for reducing evaporation and impede runoff. These systems also require a reduced number of tillage operations during the year. Whenever a moist soil is tilled, moisture is brought to the surface. This leads to more evaporation. In the western part of the state, ecofarming is a good practice for reducing soil moisture losses.

Public Policy Issues for the 1990s

Probably the most important water policy issue facing Nebraskans is how to protect drinking water from contamination by agricultural chemicals. In response to public concern, more stringent regulation of agricultural chemicals to protect drinking water quality will occur in the 1990s.

Nebraska Natural Resource Districts (NRDs) currently are authorized to restrict fertilizer and pesticide applications in order to prevent groundwater contamination in groundwater special protection areas and in groundwater management areas.

Congress is likely to include provisions in the 1990 Farm Bill encouraging low input-sustainable agricultural practices and best management practices to reduce agricultural chemical use.

EPA's proposed Pesticides in Groundwater Strategy will result in pesticide use being restricted or prohibited in areas where pesticide use will contaminate drinking water supplies. Administration of groundwater protection programs in Nebraska in the future may be funded by taxes on pesticides and fertilizers, similar to agricultural chemical checkoffs in Iowa, Kansas, South Dakota, Arizona, and Montana.

Another area of increased public debate will be the issue of instream flows. Various water development groups in Nebraska, Wyoming, and Colorado will increase pressure to impound Platte River water for competing purposes. Wildlife advocates already have attempted to have Platte River stream flow maintained during critical periods for fish and wildlife protection. Compromise efforts have failed, and these instream flow disputes will continue to be litigated in the 1990s. Although Nebraska enacted instream flow protection legislation in 1986, no instream flow water rights have yet been issued. The law is unlikely to prevent further instream flow litigation.

Groundwater supplies are being depleted gradually in several irrigated regions of Nebraska, including the upper Republican, upper Big Blue, Little Blue, central Platte, and lower Niobrara river basins. Groundwater withdrawals for irrigation deplete groundwater supplies more rapidly than supplies are being recharged from precipitation.

In some regions, irrigated acreage may be reduced up to 40 percent by 2020 if regulations are not established to limit water withdrawals or if suitable and efficient water supply augmentation projects are not developed. Irrigation withdrawals can be reduced significantly by improving irrigation practices and, ultimately, by growing crops requiring less water.

Nebraska follows a local control political philosophy of groundwater management—the decision to establish irrigation regulations is made locally by the NRD. Irrigator political resistance to groundwater regulation has prevented controls from being established in most areas with declining supplies. Continued NRD inaction may result in political pressures to make groundwater depletion control a state rather than a local decision.

A final policy issue is water exports. When the U.S. Supreme Court ruled in 1982 that water was an article of commerce, Nebraska statues severely restricting water exports into another state were invalidated. Some citizens fear that Nebraska water will be exported to meet the water needs of Denver or the Sunbelt. This is highly unlikely because of the massive costs involved. It is much less expensive for municipalities needing additional water supplies to buy irrigation water rights from local farmers and to use that water for municipal purposes. Approximately nine gallons of water are used for irrigation for each gallon of municipal water use. Municipal uses can be expanded considerably with only a modest reduction in irrigation water use through municipal purchase of irrigation water rights. Although the issue of water exports will continue to inflame political passions, the prospect of large water exports from Nebraska to other states is remote.

Summary

A cooperative effort will be required to assure an adequate supply of water to meet the state's competing needs for water resources. This effort will involve a long list of entities and agencies, including all municipalities and other public water suppliers, the legislature, the Department of Health, the Department of Environmental Control, NRDs, agriculture, industry, and many others. The key to any long-term success in maintaining an adequate water supply for all will be a commitment by individual citizens to a stewardship of water resource by practicing conservation and by protecting its quality.

Nebraska Fourth in Metro Population Growth Second in Nonmetro Losses in Seven State Area

The states of Nebraska, Iowa, Kansas, and South Dakota have sustained substantial nonmetropolitan population losses since 1984, while Colorado, Missouri, and Wyoming have experienced increases in nonmetro population during the 1980-1987 period, according to a Bureau of the Census report.

Nebraska's nonmetropolitan population loss of 2.4 percent was exceeded by Iowa's nearly five percent loss 1980-1987. Kansas and South Dakota experienced only about a 1 percent nonmetro population loss for the period.

Colorado showed the most substantial growth in nonmetropolitan population among the seven states, up 7 percent. Wyoming experienced a nearly 6 percent growth, while Missouri's nonmetro areas increased in population nearly 3 percent

In contrast, six of the seven states have shown growth in metropolitan population, with Iowa metro population remaining level.

Among the surrounding states, Nebraska ranked fourth in metropolitan population increases, up 6.3 percent between 1980 and 1987. Colorado's metro population jumped nearly 16 percent, followed by South Dakota and Kansas metropolitan population increases of about 13 percent and 10 percent, respectively.

Overall, Nebraska's total population increased 1.6 percent during the 1980-1987 period. Currently, slightly more than 47 percent of Nebraska's population resides in the state's metropolitan areas, according to the Census Bureau.

In Nebraska, the Lincoln metro area experienced the state's largest metro population increase, up nearly 8 percent between 1980 and 1987.

The Omaha area (consisting of Douglas, Sarpy, and Washington counties) experienced a nearly 6 percent population growth. Sarpy County, the fastest growing county in the state, increased nearly 13 percent.

In the Sioux City metro area, Dakota County showed nearly 3 percent population growth. In addition to Dakota County, the Sioux City metropolitan area includes Woodbury County in Iowa, which experienced a population decrease of 3.2 percent during the 1980-1987 period. The population growth in Dakota County was not sufficient to offset the Woodbury County decrease, resulting in a net decrease in the Sioux City metro area.

Iowa's Pottawattamie County, part of the Omaha metropolitan area, showed a slight population increase of 2 percent for the 1980-1987 period. In addition, two of Iowa's eight metro areas experienced population increases. Iowa City and Des Moines showed a similar 5 percent population growth. The remaining Iowa metro areas experienced decreases ranging from 0.1 to 3.3 percent.

With the decrease in nonmetropolitan, no increase in metropolitan population, and other factors, Iowa's total population declined slightly over three percent between 1980 and 1987. About 43 percent of Iowa's population currently resides in the state's metro areas.

Metropolitan areas in other states showing substantial population growth include Kansas City, Kansas, up more than 14 percent. during the 1980-1987 period. The Missouri portion of the Kansas City metro area surpassed this figure, with 34 percent population growth. About 53 percent of the total Kansas population resides in the state's metro areas.

Colorado metro population expanded substantially in the seven year period, nearly 82 percent of the state's population now lives in metro areas.

Colorado Springs and the Fort Collins-Loveland metro areas experienced the most substantial population increases of 26 percent and 20 percent, respectively. The Denver-Boulder metro area also had a substantial population gain of 15 percent.

In Missouri, Springfield led the state in metro population growth with a 10 percent increase. Although St. Charles County in the St. Louis, Missouri metro area experienced a 34 percent jump in population between 1980 and 1987, overall population for the state's metropolitan areas increased only four percent. Metropolitan growth was restrained by a nearly 7 percent decrease in the St. Louis population.

Despite the increase in nonmetropolitan population, Missouri's metro areas still account for 66 percent of the population.

South Dakota's two metro areas of Rapid City and Sioux Falls experienced about a 13 percent population growth, resulting in an overall state population increase of nearly 3 percent.

In Wyoming, however, the Casper metro population decreased over 7 percent. This was offset by a Cheyenne population increase exceeding 10 percent, resulting in a net increase in metro population of 1.2 percent for the state.

Patricia C. Dinslage

Temperature Extremes in Nebraska

The lowest temperature ever recorded in Nebraska, -47°F (-44°C), was at Camp Clarke near Northport on February 12, 1899. The highest temperature on record, 118°F (48°C), occurred on July 15, 1934 at Geneva; on July 17, 1936 at Hartington; and on July 24, 1936 at Minden.

Merlin W. Erickson

Review and Outlook

John S. Austin

National Economy

The long anticipated weakness in the national economy has appeared in the current quarter. The foreseen softening is not sufficient to be classified as a recession. When fourth quarter data are released January 26, 1990, it is anticipated that growth in real GNP will run between 0.5 percent and 1.0 percent. Just as automobile sales contributed to a strong third quarter, the weakness in the fourth quarter will be related to the auto sector. Auto sales and production will be a leading factor in lackluster fourth quarter growth.

Third quarter GNP figures recently have been revised upward. They now indicate that the third quarter grew 2.7 percent in real terms. As we previously predicted, a major factor in the revision is a decrease in the strongly negative net export figure. The change was anticipated because the September trade figures showed a sharp reduction in imports and a modest increase in exports. The principal strength in the third quarter was the auto sector. Rebates and low interest financing were used to move the last of the 1989 models. In essence, the auto producers transferred sales from the fourth quarter to the third quarter.

Auto sales are already weak in October and in early November. Furthermore, it is highly unlikely that December sales this year will meet the torrid pace of auto sales a year ago, when autos sold at the seasonally adjusted annual rate of 11.4 million units. Anticipating continued weakness in auto sales, domestic producers have cut production plans. Fourth quarter domestic production plans are at their lowest level since the fourth quarter of 1982, the end of the largest post-World War II recession this country has experienced. All of the cuts will come from the big three producers. Japanese joint venture firms will expand their production 44 percent. Total U.S. production will fall 11.7 percent for cars and 11.1 percent for trucks if current production plans are maintained.

Weak auto numbers also were reflected in the Industrial Production Index. The Industrial Production Index fell 0.7 percent in October. Contributing to the drop were lost work days due to the San Francisco earthquake and to a strike at Boeing. The Boeing strike already is settled. With the cutback in auto production, it is unlikely that the Industrial Production Index will grow in the fourth quarter. Despite increasing difficulties in the industrial production sector, the unemployment rate remained at 5.3 percent in October.

Retail sales also reflect the weakness in the auto sector. In October, total retail sales were down 1.0 percent. When autos are removed from the retail sales figure, retail sales showed a slight increase of 0.2 percent. These numbers are reported in current dollars. If one were to subtract any reasonable measure of inflation, retail sales would show no growth. Anecdotal evidence from major retailers indicates that November sales have been weak. The prognosis for this December is that current dollar sales will show a slight increase over last December. It appears that the consumer is playing a cat and mouse game with the retailer. For several years, retailers have held major sales in December. Consumer now expect those sales and will wait for them to occur. Most analysts suggest that in real terms, retail sales in December will be close to those of last year.

Amidst all the gloom, is there any reason for hope? The rebuilding activity after Hurricane Hugo and the San Francisco earthquake will contribute to future growth through increased construction spending. Because the seasonal factors for this time of year are relatively low, the seasonally adjusted November and December data may tend to overstate actual construction activity. The positive impact of the disasters shows the frailty of economic accounts. After all, rebuilding is only a replacement of lost capital stock. We do not advocate disasters or war to improve the economy.

Low interest rates should stimulate the economy. We expect housing starts to respond to lower interest rates in the near future. The October recovery in housing starts may be a harbinger for the residential construction industry.

The settlement of the Boeing strike not only will improve the Industrial Production Index figure slightly, but also should benefit the export figures. The airframe manufacturers are having a good export year.

A natural question is whether the evidence we are seeing now is a precursor of a recession or merely a pause. Economists are notable for their inability to forecast recessions, especially in terms of timing. Therefore, it is only partly reassuring that only a handful economists currently foresee a recession. The consensus forecast calls for growth rates hovering around 1 percent on an annual basis the next two to three quarters.

On the bright side, inflation has moderated. In October the Producer Price Index increased 0.4 percent. With OPEC agreeing to an expansion of output, there is room for some optimism on future energy prices. The price of West Texas crude remains below $20 per barrel. The Consumer Price Index advanced 0.5 percent in October. Part of that small increase in the Consumer Price Index is related to the increased energy prices earlier in the year.

With industrial production falling sharply, capacity utilization rates have dwindled somewhat in the last few months. Capacity utilization rates are key elements in industrial price inflation. Lower interest rates will not only stimulate the housing market, but could stimulate nonresidential investment expenditures as well. Increased nonresidential investment may result in even lower capacity utilization figures, further easing inflationary pressures.

Personal income is strong, increasing in October 0.9 percent. That jump was unique, reflecting bonuses to automobile workers for their efforts in the third quarter and an increase in farm subsidy payments. Those two factors were offset by losses due to Hugo and the San Francisco earthquake. At the same time, consumer spending dropped 0.2 percent, reflecting the fall in auto sales. The result is a dramatic increase in the savings rate, from 4.7 percent in September to 5.7 percent in October. That rate likely will drop in the coming months.

Next month, we will examine the outlook for 1990 in some detail as we prepare for the State of the State conferences.

Table I
National Indicators

	Annual		Quarterly (SAAR)			
	1987	1988	1988:II	1988:III	1988:IV	1989:I
Real GNP (percent change)	3.7	4.4	2.7	3.7	2.5	2.7
Real Consumption (percent change)	2.8	3.4	3.0	2.0	1.9	6.2
Housing Starts ($ millions)	1.6	1.5	1.6	1.5	1.4	1.3
Auto Sales ($ millions)	10.3	10.6	10.5	9.8	10.3	10.7
Interest Rate (90 day T-bill)	5.8	6.7	7.7	8.5	8.4	7.8
Unemployment Rate (percentage)	6.2	5.5	5.3	5.2	5.3	5.2
Industrial Production Index (1977=100)	129.8	137.2	139.9	140.7	141.8	142.2
Money Supply, M2 (percent change)	6.6	5.1	3.6	1.8	1.2	7.3

NOTE: SAAR — Seasonally Adjusted at Annual Rates

Table II
Employment in Nebraska

	Revised September 1989	Preliminary October 1989	October % Change vs. Year Ago
Place of Work			
Nonfarm	715,806	723,036	3.5
Manufacturing	99,429	100,461	3.6
Durables	47,806	47,861	1.5
Nondurables	51,623	52,600	5.6
Mining	1,903	1,915	24.4
Construction	27,484	28,017	6.5
TCU*	48,195	48,788	5.9
Trade	182,719	184,261	2.5
Wholesale	52,803	53,430	5.5
Retail	129,916	130,831	1.4
FIRE**	49,132	48,852	1.3
Services	168,163	169,115	5.9
Government	138,781	141,627	1.4
Place of Residence			
Civilian Labor Force	811,309	826,399	-0.82
Unemployment Rate	2.9%	2.7%	

*Transportation, Communication, and Utilities
**Finance, Insurance, and Real Estate

Source: Nebraska Department of Labor

Table III
Price Indices

	October 1989	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U* (1982-84 = 100)			
All Items	125.6	4.5	4.9
Commodities	118.1	4.1	4.8
Services	133.7	4.8	4.9
Producer Price Index (1982 = 100)			
Finished Goods	114.8	5.0	5.2
Intermediate Materials	112.3	3.4	5.1
Crude Materials	101.8	6.3	7.1
Ag Prices Received (1977 = 100)			
Nebraska	152	-0.7	7.2
Crops	124	-10.8	15.7
Livestock	169	4.3	3.4
United States	144	0.7	7.4
Crops	127	-4.5	9.5
Livestock	160	5.3	6.0

U* = All urban consumers
Source: U.S. Bureau of Labor Statistics

Nebraska Outlook

Unemployment levels in Nebraska remain extremely low. In the month of October, the unemployment rate was 2.7 percent—half the national rate. Nebraskans can pat themselves on the back for having created large numbers of new jobs. In October, jobs increased 3.5 percent over year ago levels (see Table II).

Nebraska retail sales rebounded in August from their low July levels (Figure II). Nevertheless, retail sales on a current dollar basis are still below those of March. Retail sales in constant dollar terms are below December 1988 levels.

Relatively dry moisture conditions continue to prevail in the state. Subsoil moisture in November was rated 95 percent short. Although that was beneficial to the harvest, winter wheat crops would benefit from a good soaking rain before the soil freezes.

The apparent end of the the Cold War could have long-term beneficial effects for the Nebraska economy. Initially there could be a surge in exports of food and food products to eastern Europe. There is no guarantee, however, that the new governments will be able to reorganize their economies in a timely manner. While the demand for food products exists, demand without money to back it is meaningless.

In the long run, eastern Europe could be a market for U.S. agricultural equipment. But,should the eastern Europeans be able to reorganize their agricultural industries, it could mean a long-term decrease in their demand for U.S. ag products.

Nebraska construction activity continues to run counter to national trends. According to F.W. Dodge reports, October saw a surge in total building activity in terms of new contracts. On a year-to-date basis, total building square footage contracts have advanced 22.5 percent. Total projects in the state, including both building and nonbuilding, have increased 16.7 percent on a year-to-date basis.

Table IV
City Business Indicators
August 1989 Percent Change from Year Ago

The State and Its Trading Centers	Employment (1)	Building Activity (2)
NEBRASKA	-0.3	7.6
Alliance	0.0	-6.9
Beatrice	0.8	3.6
Bellevue	0.4	-5.2
Blair	0.4	-11.7
Broken Bow	0.6	-1.1
Chadron	0.6	-18.8
Columbus	0.4	-5.4
Fairbury	0.4	-25.6
Falls City	0.5	14.6
Fremont	0.2	53.7
Grand Island	0.3	-3.9
Hastings	0.1	-14.7
Holdrege	0.5	-33.0
Kearney	0.4	23.8
Lexington	0.3	33.6
Lincoln	0.2	18.4
McCook	-0.2	36.1
Nebraska City	0.5	122.2
Norfolk	0.4	7.6
North Platte	0.0	49.4
Ogallala	0.4	-0.8
Omaha	0.4	1.5
Scottsbluff/Gering	0.2	-13.7
Seward	0.3	-14.8
Sidney	0.2	-18.3
South Sioux City	0.3	-7.9
York	0.4	-1.3

(1)As a proxy for city employment, total employment (labor force basis) for the county in which a city is located is used

(2)Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes

Sources: Nebraska Department of Labor and reports from private and public agencies

Figure I
City Business Index
August 1989 Percent Change from Year Ago

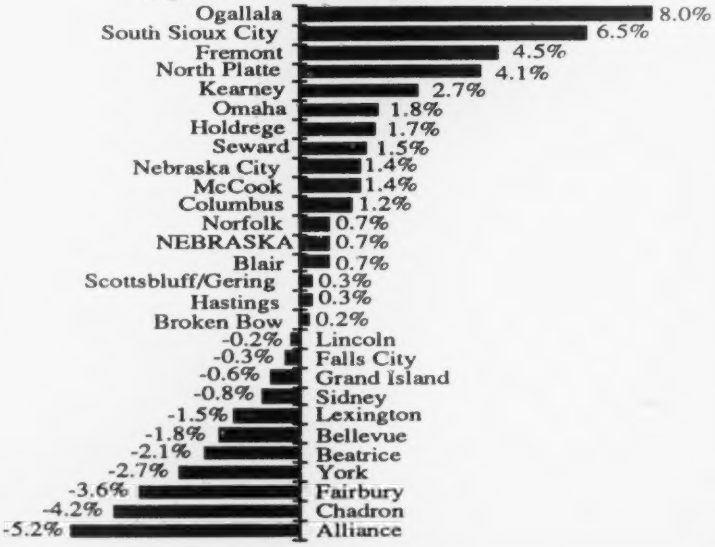
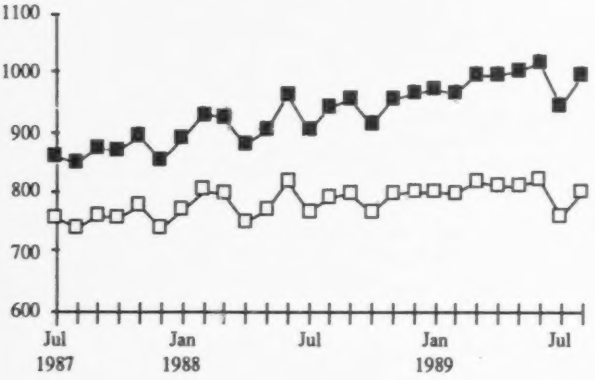


Table V
Net Taxable Retail Sales of Nebraska Regions and Cities

Region Number and City (1)	City Sales (2) August 1989 (000s)	City Sales (2) % Change vs. Year Ago	Region Sales (2) August 1989 (000s)	Region Sales (2) % Change vs. Year Ago	YTD % Change vs. Year Ago
NEBRASKA	$884,740	5.5	$1,035,894	6.3	7.7
1 Omaha	317,633	7.9	399,843	8.5	9.4
Bellevue	12,597	0.2	*	*	*
Blair	4,138	7.0	*	*	*
2 Lincoln	122,189	1.8	144,091	3.5	4.5
3 South Sioux City	5,283	20.2	7,434	13.5	4.4
4 Nebraska City	3,509	-2.1	18,177	2.4	2.0
6 Fremont	15,876	9.8	29,711	8.3	5.4
West Point	2,742	12.8	*	*	*
7 Falls City	1,778	1.4	8,440	6.1	0.0
8 Seward	4,246	9.3	14,358	1.2	2.3
9 York	6,436	-2.2	15,387	-0.7	9.5
10 Columbus	14,552	7.3	26,351	5.2	5.8
11 Norfolk	18,905	4.7	33,207	3.4	7.6
Wayne	2,563	3.6	*	*	*
12 Grand Island	34,727	3.0	49,419	2.3	9.3
13 Hastings	16,119	6.8	25,915	8.0	7.7
14 Beatrice	6,887	-1.9	16,753	-1.4	0.7
Fairbury	2,611	-1.3	*	*	*
15 Kearney	21,450	7.7	30,113	6.8	10.1
16 Lexington	5,430	-2.8	16,361	4.7	6.8
17 Holdrege	4,277	12.2	8,594	10.2	6.6
18 North Platte	17,001	9.4	21,874	10.5	5.2
19 Ogallala	7,045	22.7	13,076	15.8	12.8
20 McCook	7,981	4.2	11,638	4.9	4.0
21 Sidney	3,984	4.5	7,976	-5.5	1.6
Kimball	1,682	-13.0	*	*	*
22 Scottsbluff/Gering	18,070	6.4	25,487	4.3	10.3
23 Alliance	4,697	-7.1	14,614	5.2	2.1
Chadron	2,588	-3.9	*	*	*
24 O'Neill	4,198	12.0	14,527	11.9	12.1
Valentine	2,774	14.1	*	*	*
25 Hartington	1,279	-10.6	8,113	-3.6	1.4
26 Broken Bow	3,326	4.2	12,283	4.3	6.4

(1) See region map
(2) Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales
* Within an already designated region
Compiled from data provided by the Nebraska Department of Revenue

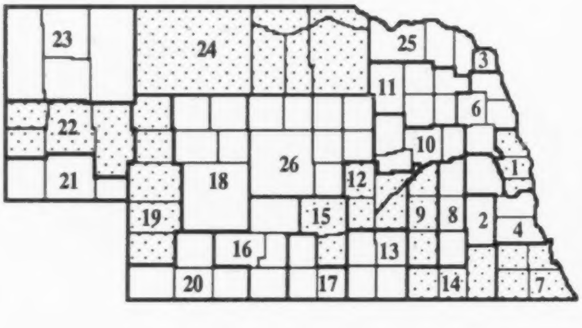
Figure II
Nebraska Net Taxable Retail Sales
(Seasonally Adjusted, $ Millions)



■ Current Dollars ☐ Constant Dollars

(1) The Consumer Price Index (1982-84 = 100) is used to deflate current dollars into constant dollars

Figure III
Region Sales Pattern
YTD as Percent Change from Year Ago



Shaded areas are those with sales gains above the state average. See Table V for corresponding regions and cities

Make Your Reservation Today

Now is the time to make your reservation for the second annual State of the State conferences:

- Ogallala, Holiday Inn, January 16, 1990
- Lincoln, Nebraska Center for Continuing Education, January 23, 1990
- Omaha, Holiday Inn, I-80 at 72nd Street, February 1, 1990

For reservation information, contact the Bureau of Business Research, 402/472-2334 or write: Bureau of Business Research, 200 CBA, University of Nebraska - Lincoln, Lincoln, NE 68588-0406

It's The Water . . .

The Popcorn Institute says it's the water that makes it pop! Popcorn kernels are composed of carbohydrate, protein, fat, and water. In each kernel, water is stored in a small circle of soft starch. As the kernel is heated, the moisture heats, builds pressure, and swells to fill any available room. When the outer surface gives way, the water further expands, causing the popcorn to explode. The soft starch pops out, the kernel turns inside out, steam inside the kernel is released, and the corn pops. Processors generally adjust the moisture level in popcorn to 13.5 percent or 14 percent to ensure maximum popability.

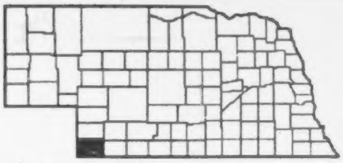
Nebraska growers produced 82.9 million pounds on 24,100 acres in 1986. Indiana, Illinois, and Ohio typically are the largest producers; however, 1988 popcorn production in each of these states was less than in Nebraska due to the drought. In 1988 Nebraska produced 111.2 million pounds, about 22 percent of the nation's popcorn output.

Americans consume 12.9 billion quarts of popped popcorn annually, 52 quarts per man, woman, and child. Approximately 70 percent of this total is eaten in the home and about 30 percent outside the home (theaters, stadiums, schools, etc.) Unpopped popcorn accounts for approximately 90 percent of sales for home consumption.

Merlin W. Erickson

County of the Month

Dundy



Benkelman--County Seat

Size of county: 577 square miles, ranks 47th in the state

Population: 2,700 (estimated) in 1988, a change of -6.4 percent from 1980

Median age: 38.4 years in Dundy County, 29.7 years in Nebraska in 1980

Per capita personal income: $18,979 in 1987, ranks 4th in the state

Net taxable retail sales ($000): $11,471 in 1988, a change of +11.0 percent from 1987; $7,855 during January-August 1989, a change of +4.9 percent from the same period one year ago

Number of business and service establishments: 72 in 1986; 72.2 percent had less than five employees

Unemployment rate: 1.4 percent in Dundy County, 3.6 percent in Nebraska for 1987

Nonfarm employment (1988):

	State	**Dundy County**
Wage & salary workers	688,146	640
	(percent of total)	
Manufacturing	13.8%	0.4%
Construction and Mining	3.8	5.2
TCU	6.5	7.5
Retail Trade	18.5	17.2
Wholesale Trade	7.3	7.5
FIRE	7.0	2.3
Services	23.0	21.9
Government	20.1	38.0
Total	100.0%	100.0%

Agriculture:

Number of farms: 389 in 1987, 382 in 1982

Average farm size: 1,379 acres in 1987

Market value of farm products sold: $55.8 million in 1987 ($143,400 average per farm)

Sources: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, Nebraska Department of Labor, Nebraska Department of Revenue

Merlin W. Erickson

Business in Nebraska

PREPARED BY BUREAU OF BUSINESS RESEARCH
Association for University Business & Economic Research

Business in Nebraska is issued as a public service and mailed free of charge upon request to 200 CBA, University of Nebraska-Lincoln, Lincoln, NE 68588-0406. Copyright 1989 by Bureau of Business Research, University of Nebraska-Lincoln. ISSN 0007-683X.

December 1989, Volume 45 No. 543

University of Nebraska-Lincoln-- Martin Massengale, *Chancellor*
College of Business Administration--Gary Schwendiman, *Dean*

Bureau of Business Research
F. Charles Lamphear, *Director*
Merlin W. Erickson, *Research Associate*
Margo Young, *Editorial Assistant*
John S. Austin, *Statistical Coordinator*
Barbara Sumsion, *Composing Technician*
Lisa Darlington, *Secretary*
Dave DeFruiter, *Information Systems Coordinator*

The University of Nebraska-Lincoln does not discriminate in its academic, admission, or employment programs and abides by all federal regulations pertaining to same.

Nonprofit Org.
U. S. Postage
PAID
Lincoln, Nebraska
Permit No. 46

```
CONGRESSIONAL INFO SERVIC270238
SRI                          BR
4520 EAST-WEST HWY
BETHESDA, MD  20814
```

U7860-1

Business In Nebraska

January 1990
Vol. 45 No. 544

Prepared by the Bureau of Business Research
200 College of Business Administration
University of Nebraska-Lincoln
Lincoln, NE 68588-0406
402/472-2334

Nebraska Economic Projections for 1990

James R. Schmidt, UNL Associate Professor of Economics

A Summary of 1990 Economic Projections

* Nebraska's Gross State Product will grow 1.2 percent in real terms (1982 dollars) to $25.3 billion. That growth contrasts with an increase of 1.7 percent in the nation's real GNP.

* The state's nonfarm wage and salary jobs will increase to an annual average of 721,700, a gain of 1.5 percent. That increase closely parallels a growth in U.S. establishment jobs of 1.6 percent in 1990.

* Nebraska's 1990 unemployment rate of 3.5 percent will continue to be well below the national unemployment rate of 5.6 percent.

* The state's total personal income in current dollars will increase 5.3 percent to $26.3 billion. The nation's personal income will increase 6.3 percent.

* Nebraska's net taxable retail sales will grow 6.4 percent to $12.7 billion. U.S. current dollar consumption will grow at a similar rate.

Overview

The Nebraska economy has just finished the decade of the 1980s at activity levels that could prompt any number of descriptions, depending upon one's vantage point or predisposition. A mixed set of signals emerges when the major performance measures of the state's economy are evaluated. For the observer prone to the use of cliches, the standard statement that the current situation is one of "great uncertainty" probably would suffice. This article attempts to provide a bit more substance in the assessment of where the Nebraska economy stands and where it appears to be headed.

Signals that generate continued optimism for the state's economy are easy to find. Job counts have risen substantially in the past few years. The monthly unemployment rate slipped below 3.0 percent on several occasions during 1989. Inflation rates are moderate. Nonfarm income growth has been steady. Several industries have enjoyed extremely high rates of growth. Few would quarrel with the assessment that the state's economy has come a long way from the dark days of the early 1980s and that there currently is a good deal of forward momentum.

Yet signals of caution and harbingers of moderating growth are also present. Farm income is beginning to falter. With continued decreases in target prices and uncertain climatic conditions, the prospects for a quick recovery appear dim. Monthly retail sales growth measured with respect to year earlier levels is tapering. Job creation has proceeded at a vigorous pace, but the number of employed Nebraskans has not grown commensurately. Nor has the labor force count shown a strong growth reaction to the expansion in employment opportunities. The national economy shows signs of cooling, a direction that will be transmitted to the state's economy.

Several broad categories of economic indicators for Nebraska will be treated in this article. The categories include Gross State Product, the labor market, personal income, and net taxable retail sales. A brief summary of the last several years of activity will be offered for each category, and projections for 1990 will be given. The overall tone of the 1990 projections calls for a year of continued growth in the economy, but at a lower rate than has been achieved in the past two years. Some areas of the state's economy will slip significantly from their recent growth paths, while others will remain on a steadier course.

Table 1
Gross State Product by Industry in Nebraska
($ Millions, 1982 Dollars)

Industry	1986	1987*	1988*	1989*	1990	% Change 1989-1990	Average Annual % Change 1986-1989
Farm	3,538	3,447	3,285	3,068	2,998	-2.3	-4.6
Agricultural Services	125	146	151	148	142	-4.1	6.1
Mining	79	77	76	75	74	-1.3	-1.7
Construction	814	807	830	851	862	1.3	1.5
Durables Manufacturing	2,040	2,136	2,301	2,402	2,478	3.2	5.6
Nondurables Manufacturing	1,593	1,635	1,699	1,791	1,825	1.9	4.0
Transportation, Communication, Utilities	2,576	2,615	2,684	2,757	2,799	1.5	2.3
Wholesale Trade	1,795	1,872	1,994	2,033	2,075	2.1	4.3
Retail Trade	2,098	2,101	2,151	2,155	2,170	0.7	0.9
Finance, Insurance, Real Estate	3,633	3,697	3,757	3,877	3,935	1.5	2.2
Services	2,899	2,992	3,163	3,238	3,304	2.0	3.8
Federal Government	501	510	518	530	542	2.3	1.9
State and Local Government	1,981	1,984	2,014	2,035	2,046	0.5	0.9
Nebraska Nonfarm GSP**	20,135	20,572	21,338	21,891	22,253	1.7	2.8
Nebraska Total GSP	23,673	24,019	24,623	24,959	25,251	1.2	1.8
U.S. Total GNP ($ billions)	3,718	3,854	4,024	4,142	4,225	1.7	3.3

*Figures for 1987-1989 are estimates made in advance of official releases
**Totals may not add due to rounding
Historical source: Bureau of Economic Analysis: April 1988 release of Gross State Product

Gross State Product

The state analog of the nation's Gross National Product (GNP) is Gross State Product (GSP), the market value of goods and services produced by a state's labor and property resources within a year. GSP is the broadest measure available for tracking a state's economic progress, and it is available on an industry breakdown. GSP estimates are expressed in constant dollars; real growth in industries and the full economy can be assessed without interference from the influence of price changes.

Table 1 contains GSP figures for the major industry classifications and state totals over the 1986-1990 span. Total GSP has grown at an average annual rate of 1.8 percent over the 1986-1989 period, with the largest annual growth of the period occurring in 1988 when the rate was 2.5 percent. Figure 1 portrays the growth rates. The average rate of 1.8 percent over 1986-1989 was respectable, but falls short of the 3.3 percent average annual growth posted by U.S. GNP over the same period.

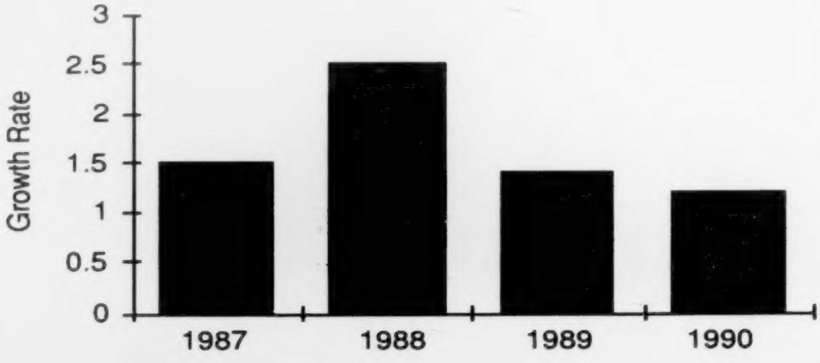
Nebraska consistently has lagged the U.S. in real growth, and the pattern is likely to continue in the near future. If one considers only nonfarm GSP in Figure 2, Nebraska's recent growth rates compare more favorably with those of the nation's GNP. Nonfarm GSP has averaged an annual growth rate of 2.8 percent over the 1986-1989 period, a performance that compares favorably with the 3.3 percent rate for the nation's GNP. The higher growth rate of nonfarm GSP over the period versus that of total GSP is the result of a slowdown in real activity levels in the farm sector.

Nebraska's total GSP will continue to grow in 1990, but at a lower rate than has occurred in any of the past four years. The projected 1990 growth rate of 1.2 percent is only slightly below that estimated for 1989, but is well below the rate posted in the peak growth year of 1988. The nation's growth rate in GNP is expected to ease to around 1.7 percent for 1990. The effects of moderating growth rates will be transmitted to the state economy.

Nebraska's farm GSP is expected to drop 2.3 percent in 1990, consistent with the sluggish farm income performance that is anticipated. In contrast, nonfarm GSP should advance in 1990 at a 1.7 percent rate, a pace of growth equivalent to that of the nation's economy. There is definitely some momentum in the nonfarm portion of Nebraska's economy that will continue into 1990.

Turning to the state's nonfarm industries, durable manufacturing has led the way in growth of gross product during the 1986-1989 period with an average annual

Figure 1
Total Gross State Product
(1982 Dollars)



rate of 5.6 percent. Growth in the industry slowed a bit in 1989, falling to 4.4 percent from the 1988 peak. The rate still represented an outstanding performance. Job creation and increased investment will continue to move the industry forward during 1990, but not at the pace of the past three years.

Durables gross product is projected to grow 3.2 percent in 1990. This figure is the highest among the rates anticipated for the broad industry classifications shown in Table 1. The nondurables portion of the manufacturing industry also has had a strong performance during the 1986-1989 period, surpassing durables in the annual growth rate for 1989. Growth is expected to slow in the nondurables sector during 1990 to a rate of increase of 1.9 percent.

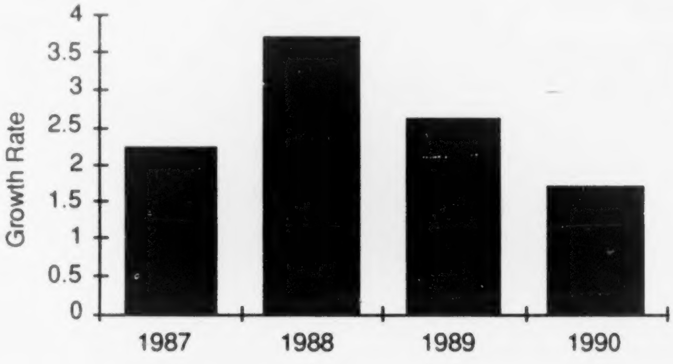
Both the durables and nondurables sectors of manufacturing in Nebraska are responsive to movements in their national counterparts—the moderation of growth in the national economy will prompt similar reactions at the state level. The higher growth rate of durables versus nondurables expected for 1990 is a reflection of the same pattern anticipated in the two national sectors.

Wholesale trade has been another strong industry for Nebraska over the past several years, averaging an annual growth rate of 4.3 percent in gross product over the 1986-1989 period. Only durables manufacturing outpaced wholesale trade during that time span. The industry quickly is establishing itself as a growth leader in the state economy and will continue to advance in 1990 at a projected rate of 2.1 percent.

Services also has emerged as a pivotal industry in Nebraska's growth patterns. Gross product in services grew 3.8 percent on the average annual basis during 1986-1989, due in large part to substantial job gains that have occurred in the industry. More moderate growth at a rate of 2.0 percent is projected for the services sector in 1990.

Industries in the private nonfarm group, other than those noted above, are projected to have 1990 growth rates of gross product under the 1.7 percent rate expected for the nonfarm group as a whole. Within this set, transportation, communication, and utilities (TCU) and finance, insurance, and real estate (FIRE) lead the way with projected rates of 1.5 percent. In both cases, the projected rate is lower than either the annual average attained over the 1986-1989 period or the rate for 1988.

Figure 2
Nonfarm Gross State Product
(1982 Dollars)



The construction industry is projected to trail TCU and FIRE in growth by a slight margin at a rate of 1.3 percent. Construction has been on a fairly steady course of recovery during the past two years, and 1990 should hold more progress for the industry, but at a slower pace. Gross product in retail trade will grow at a slow pace of 0.7 percent during 1990, reflecting continued sluggishness in wage and profit growth of the industry.

Finally, three industries are projected to register declines in gross product during 1990: farming, agricultural services, and mining. Mining has a small gross product, yet remains an important industry in some parts of the state. Mining gross product has been languishing in the mid-$70 millions, with no dramatic departures from that general level anticipated.

Labor Market

The labor market in 1989 resembled an economic version of Jekyll and Hyde; one barometer of the market was caught in a frenzy of activity, while the other barometer behaved in a rather subdued fashion. The first barometer is the number of jobs, while the second barometer is the number of employed or unemployed Nebraskans.

Mistakenly mixing the two can lead to great confusion; their distinction is useful to keep in mind when evaluating the performance of the labor market. Jobs are recorded on the basis of place of work, while the number of employed and unemployed Nebraskans are recorded by place of residence. Job counts are not counts of employed Nebraskans. One employed Nebraskan could hold multiple jobs or could be employed exclusively outside the state. Conversely, out-of-state residents can hold Nebraska jobs, but they would not be counted among Nebraska's employed. Further, job counts refer only to wage and salary jobs, thereby excluding proprietors. Proprietors, however, are included in the count of employed Nebraskans.

Nebraska's overall job count rose dramatically in 1989. Although the entire year's data are not available at the time of this writing, the estimate given in the labor market figures of Table 2 shows the nonfarm wage and salary job total for 1989 to be 711,193, on an annual average basis. The figure includes full- and part-time jobs and represents a dramatic increase of slightly more than 23,000 jobs within one year, a percentage gain of 3.3 percent. Job additions from LB775 agreements, the relatively strong growth in the state's nonfarm industries, and modest wage rate pressures in light of favorable inflation reports all contributed to the surge. For the 1986-1989 period as a whole, the total job count has risen almost 60,000 for an annual average growth rate of 2.9 percent. Figure 3 portrays the annual growth rates that were achieved during this period.

Job growth will continue to occur in Nebraska during 1990, but not at the rapid pace set in 1988 and 1989. The projected

Table 2
Job and Employment in Nebraska
(Annual Averages)

	1986	1987	1988	1989*	1990	% Change 1989-1990	Average Annual % Change 1986-1989
By Place of Work (Count of Jobs)							
Mining	1,723	1,721	1,582	1,665	1,665	0.0	-1.0
Construction	24,598	24,526	24,535	26,296	27,017	2.7	2.3
Durables Manufacturing	41,314	43,318	46,477	47,697	48,314	1.3	4.9
Nondurables Manufacturing	44,612	45,296	48,278	50,776	52,095	2.6	4.4
Transportation, Communication, Utilities	42,669	42,993	44,986	47,665	48,325	1.4	3.8
Wholesale Trade	46,818	47,806	50,021	52,533	54,581	3.9	3.9
Retail Trade	122,240	125,212	127,499	130,822	131,192	0.3	2.3
Finance, Insurance, Real Estate	46,828	48,006	47,933	49,092	50,105	2.1	1.6
Services	146,715	152,943	158,535	165,577	169,244	2.2	4.1
Federal Government-Civilian	17,572	18,134	17,949	18,083	18,124	0.2	1.0
State & Local Government	117,311	117,162	120,353	120,987	121,078	0.1	1.0
Total Nonfarm Wage & Salary	652,399	667,117	688,146	711,193	721,739	1.5	2.9
By Place of Residence (Count of Persons)							
Labor Force	813,000	812,001	817,000	817,200	821,586	0.5	0.2
Unemployment	41,000	40,000	29,000	25,330	28,689	13.3	-14.2
Unemployment Rate	5.0	4.9	3.6	3.1	3.5		
Employment	772,000	772,001	788,000	791,870	792,897	0.1	0.9

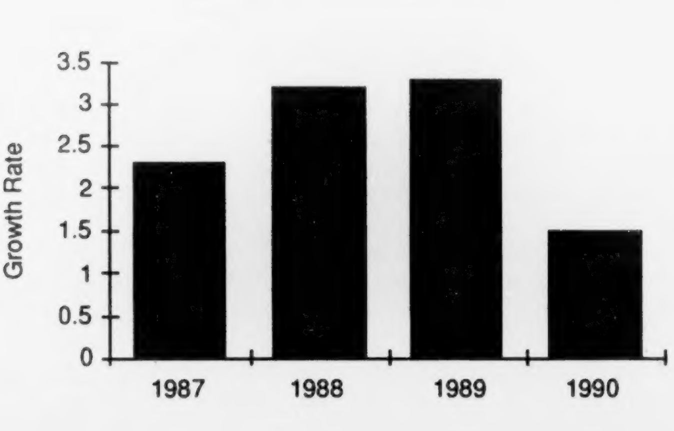
*Figures for 1989 are estimates made in advance of official releases
Historical source: Nebraska Department of Labor

growth rate for 1990 is a more moderate 1.5 percent, resulting in an expected increase of around 10,500 jobs for the year. This addition will take the overall job count close to the 722,000 mark. The general slowing of growth in the national and state economies makes continuation of the recent job growth rates an unlikely prospect. Yet adding 10,500 jobs in the coming year will be a good showing when compared to historical episodes of slowing growth in the state economy.

Among the nonfarm industries, durables and nondurables manufacturing have been the leaders in job growth on a percentage basis during the 1986-1989 period. Durables achieved an average annual growth rate of 4.9 percent, while nondurables was not far behind with a rate of 4.4 percent. When one recalls the severe declines in manufacturing employment in the early 1980s, the recent record of job growth in the two sectors is astonishing. Both sectors will continue to add jobs in 1990, but at slower paces than in 1989. The expected rates of growth are 1.3 percent and 2.6 percent for durables and nondurables, respectively.

The services industry has been right behind manufacturing in terms of recent job growth, posting an average annual growth rate of 4.1 percent over the 1986-1989 span. Close to 19,000 of the roughly 60,000 jobs added in the entire state economy over that span have come in services. Job growth in services is projected to slow a bit in 1990 to 2.2 percent, but the rate still implies a gain of about 3,700 jobs. With the projected increase in jobs for the entire state close to 10,500, the proportion of job gains in the state attributable to the services industry will remain in the neighborhood of one-third.

Figure 3
Nonfarm Wage and Salary Jobs

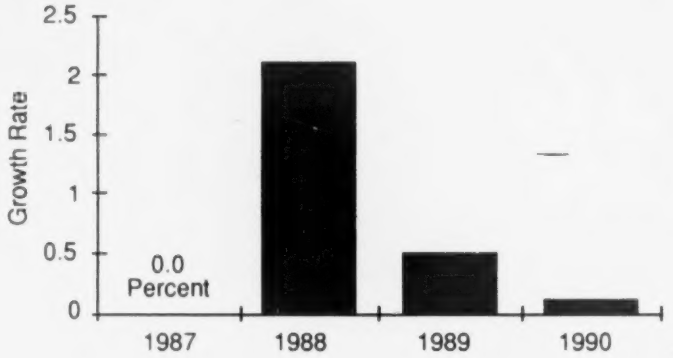


TCU and wholesale trade were slightly below 4.0 percent in their average annual growth rates in jobs during 1986-1989. The estimated growth rate of 6.0 percent for jobs in TCU during 1989 is surpassed only by the 7.2 percent rate in construction. Wholesale trade should show a 5.0 percent gain when the final 1989 figures are released. Both of these industries have recovered nicely, in terms of job counts, from their doldrums of the early 1980s.

Wholesale trade is projected to lead all industries in terms of job growth rates for 1990. The growth rate for jobs in TCU during 1990 is expected to fall into the middle of the industry pack. Construction is coming off a banner year of job growth where almost 1,800 jobs were added. The industry would be hard pressed to maintain such a rapid pace. Jobs will continue to be added in 1990, but the growth rate will slip to 2.7 percent for the year. This rate is second highest among the industries of Table 2.

The second barometer of the state's labor market to be considered here is the number of employed and unemployed Nebraskans, the sum being the state's labor force. These counts appear in Table 2. Growth in the number of employed Nebraskans has proceeded at a 0.9 percent average annual rate over the 1986-1989 period, resulting in an increase of about 20,000 additional Nebraskans finding employment. Figure 4 shows the annual growth rates for the period.

Figure 4
Employed Nebraskans



Although a growth total of 20,000 Nebraskans is significant, it must be evaluated in light of the substantial increase of 60,000 jobs over the same time period. Clearly, growth in the number of employed Nebraskans is falling far short of the growth in jobs. The growth gap between jobs and persons was especially glaring in 1989. Approximately 23,000 jobs were added, but only about 4,000 more Nebraskans were employed than in 1988.

With the labor force (employed plus unemployed) remaining almost constant between 1988 and 1989, the number of unemployed Nebraskans fell. The unemployment rate fell below 3.0 percent for some months of 1989 and to 3.1 percent on the annual average basis. An unemployment rate at this low level is a clear signal of a tight labor market. The labor force has grown only a little over 4,000 persons since 1986.

A new supply of potential employees has not appeared in response to the job growth that has occurred of late. Renewed population and labor force growth may occur with a lag as potential participants sort the signals provided by vigorous job growth. If Nebraska's population fails to respond with renewed growth, however, the labor pool necessary eventually to validate the job gains will not be forthcoming. In the event of this latter scenario, continuing the job gains on the order seen over the past few years will become increasingly difficult.

It is hoped that labor force growth will resume in an orderly fashion. Failing that, substantial job gains in the future will rely even more upon multiple job-holding (moonlighting), the holding of Nebraska jobs by nonresidents, and the conversion of proprietors into wage and salary workers. Only minor growth in the labor force, on the order of about 4,400 Nebraskans, is expected for 1990. The number of employed Nebraskans is projected to rise around 1,000. A small increase in the unemployment rate to the 3.5 percent level will occur. This slight upturn in the unemployment rate is consistent with an economy that is entering a period of slower growth.

Personal Income

Some surprises were provided by the Bureau of Economic Analysis last September when the revised income accounts for Nebraska through 1988 were released. A major downward revision of farm income levels for the past few years was made by the federal agency. The prevailing figure prior to the revision had shown Nebraska's 1987 farm income to have been close to $1.9 billion, while the 1988 income figure apparently had surged to a record high of around $2.1 billion.

According to the revisions, these growth patterns were incorrect—the revised pattern was just the opposite. Nebraska's farm income peaked in 1986 at $1.968 billion, fell almost imperceptibly in 1987, and then fell 13.0 percent in 1988 to $1.819 billion. Table 3 contains the updated current dollar figures on all the income categories and components. With the farm income revisions and developing weakness in the farm sector during 1989, Nebraska's total personal income grew only at a 4.9 percent average annual rate over the 1986-1989 period.

Nonfarm income growth was able to dilute the farm income drops somewhat, posting a 6.0 percent growth rate on the average annual basis during the same period. Figures 5 and 6 portray the annual growth rates of total and nonfarm personal income, respectively. Nonfarm income posted a respectable growth rate of 6.5 percent for 1988 and is expected to have grown 6.9 percent in 1989 when the final figures become available. Wages and salaries, as well as other labor income, have achieved strong growth during the past two years due to the substantial gains in job counts.

Unfortunately, a tempering influence upon the vigor of the nonfarm economy is beginning to be felt. The farm income estimates for the past two years show significant declines. A drop of 13.0 percent from the 1988 figure is anticipated when the final figure for 1989 is released later this year. Several factors have contributed to the decline, including lower target prices for federal program commodities and lower 1989 crop harvest totals in some areas.

Growth in Nebraska's nonfarm income during 1990 should taper about one percentage point from the 1989 growth rate to 6.0 percent. The 6.0 percent mark would put the year on par with the average growth rate achieved over the 1986-1989

Table 3
Income in Nebraska
($ Millions, Current Dollars)

	1986	1987	1988	1989*	1990	% Change 1989-1990	Average Annual % Change 1986-1989
Total Personal Income	21,589	22,475	23,670	24,948	26,272	5.3	4.9
Nonfarm Personal Income	19,620	20,518	21,851	23,366	24,769	6.0	6.0
Farm Personal Income	1,969	1,957	1,819	1,582	1,503	-5.0	-6.9
Components of Total Personal Income							
Earnings	16,016	16,781	17,632	18,578	19,512	5.0	5.1
Wages and Salaries	11,490	12,085	12,884	13,867	14,778	6.6	6.5
Other Labor Income	1,019	1,078	1,159	1,266	1,365	7.8	7.5
Proprietors' Income	3,507	3,618	3,589	3,444	3,369	-2.2	-0.6
Less: Social Insurance Contribution	997	1,057	1,188	1,271	1,353	6.5	8.5
Plus: Residence Adjustment	-297	-336	-354	-376	-398	5.9	8.3
Plus: Dividends, Interest, Rent	3,905	4,005	4,326	4,584	4,902	6.9	5.5
Plus: Transfer Payments	2,961	3,081	3,254	3,433	3,608	5.1	5.1
U.S. Personal Income ($ billions)	3,526	3,778	4,065	4,422	4,716	6.6	7.8

*Figures for 1989 are estimates made in advance of official releases
Historical source: Bureau of Economic Analysis: August 1989 release of state personal income

period. This is not a projection of impending doom, but a projection of growth moderation. Two broad categories of influence will be at work. First, the slowing of the national economy's growth will be transmitted throughout the industries of Nebraska. Note in Table 3 the anticipated softening in the growth rate of U.S. personal income for 1990.

Second, the income declines in the farm sector will translate into a drag upon continued growth in the nonfarm economy, particularly in those locales and industries tied closely to farm activity. Farm income is expected to continue to decline in 1990, but at a more moderate rate than in 1989. The weighted combination of the farm and nonfarm income figures results in an expected growth rate of 5.3 percent for total personal income in 1990, representing only a slight drop from the 5.4 percent rate expected for 1989.

The compositions of these similar rates differ, however. For 1989, nonfarm income is expected to have finished with a stronger growth performance than will be the case for 1990. Conversely, the farm income decline expected for 1990 is less than that for 1989. As usual, the farm sector holds the trump card. If farm income falters in 1990 to a greater degree than in the projection, the total income projection will be too optimistic. The nonfarm income projection also will fall short due to the transmission of effects from the farm sector.

Figure 5
Total Personal Income

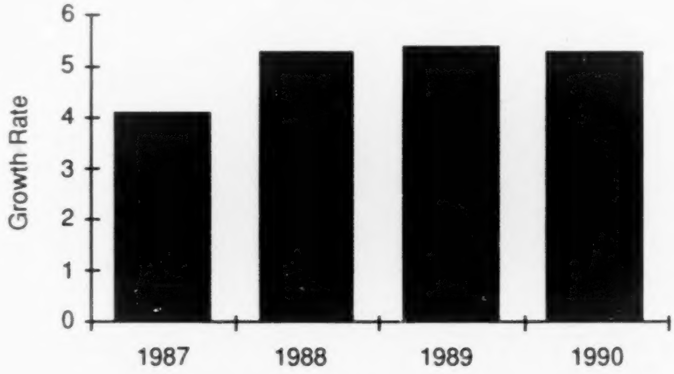


Figure 6
Nonfarm Personal Income

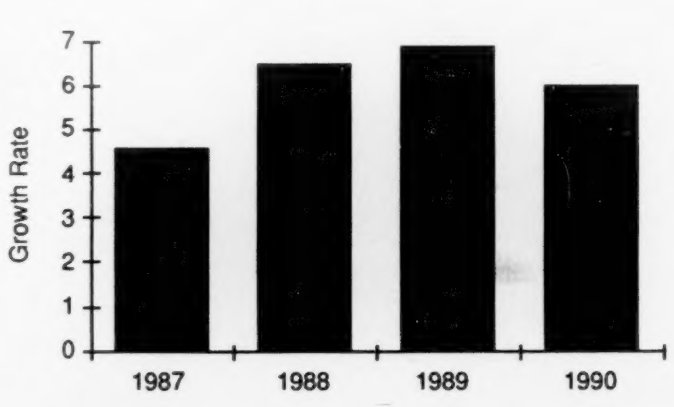


Table 4
Net Taxable Retail Sales in Nebraska
($ Billions, Current Dollars)

Category	1986	1987	1988	1989*	1990	% Change '89-'90	Average Annual % Change '86-'89
Motor Vehicle	1.246	1.191	1.414	1.529	1.622	6.1	7.5
Nonvehicle	8.555	8.852	9.716	10.406	11.080	6.5	6.8
Total	9.801	10.043	11.130	11.935	12.702	6.4	6.8

*Figures for 1989 are estimates made in advance of official releases
Historical source: Nebraska Department of Revenue

Retail Sales

Net taxable retail sales in Nebraska continued to grow at a reasonably good pace during 1989. Final figures for sales in 1989 are not yet available. Table 4 contains the relevant data on sales. Growth in 1989 is expected to have moderated from 1988, particularly in the motor vehicle sales category. Those sales skyrocketed 18.7 percent in 1988 over 1987 sales, an unusual performance that could not be sustained into 1989.

The exceptionally strong growth pattern did manage to continue into the early months of 1989, but has abated except for a bit of a flourish at the end of the model year. A growth rate of 8.2 percent for motor vehicle sales in 1989 is expected in the final tabulations. In 1990, a moderation in the growth rate of motor vehicle sales to 6.1 percent for the year is projected.

Early reports of consumer reactions to the 1990 model year and accompanying price hikes do not paint a rosy picture. Quick moves by the auto industry toward price concessions in early 1990 (incentives, rebates, etc.) may make the projection overly pessimistic.

Nonvehicle sales have grown at a slower pace than motor vehicle sales over the past two years, but the rates of 9.8 percent and 7.1 percent in 1988 and 1989, respectively, are symptomatic of the Nebraska economy's strength through the period. In 1990 continued cooling of the growth rate is expected for nonvehicle sales, with the year's eventual figure 6.5 percent higher than the figure for 1989.

Such moderation in growth does not translate into a signal of desperation for the sales picture. The 6.5 percent rate admits positive real growth for the year after discounting the effects of the anticipated inflation rate. The pattern expected for the total of motor vehicle and nonvehicle sales follows that of the latter closely, as the nonvehicle sales category is the dominant component.

Review and Outlook of the National Economy

John S. Austin, UNL Bureau of Business Research

The outlook for 1990 calls for a soft landing. Inflation and economic growth are expected to slow from 1989 levels. The official definition of a recession calls for at least two quarters of negative growth in GNP. Although no recession is foreseen at this time, growth rates in late 1989 and early 1990 are so small that it would take little to tip one of those quarters into the negative column. Nevertheless, a broad systemic weakness in the economy is not apparent; a short-term pause in growth rates is most likely.

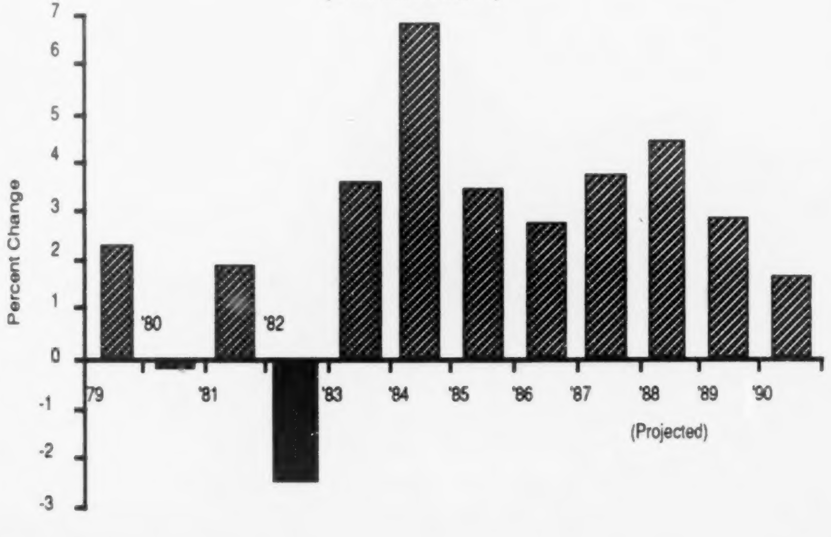
The Decade of the 1980s

The early years of the 1980s were characterized by high inflation and high interest rates. Who can forget 17 percent mortgage rates of 1981? In 1980 GNP turned down for only a single quarter, but the downturn of second quarter real GNP was a huge 9.2 percent at annual rates. In August 1981, the worst post-World War II recession began. Recovery didn't start until December 1982. (See Figure 1.)

From such a poor beginning was there anywhere to go but up? Real GNP grew 30 percent from 1979 until 1989. The growth from November 1982 has been uninterrupted by a downturn. There were several economists who thought that 1986 would be a recession year. When 1986 passed without a downturn, the gloom and doomers jumped on a treadmill, postponing the start date of their imminent recession. Their behavior is reminiscent of the boy crying wolf. Just as in the fairy tale, we citizens need to remain wary that the wolf of recession still may be lurking somewhere, ready to strike if we let down our defenses.

Why was there such prolonged continuous growth in the 1980s? There are

Figure 1
Gross National Product
(Constant Dollars)



two answers to that question. One is that we started from an extreme low at the end of the 1981-82 recession and had ample room to grow without capacity limitations. Second, the continuous expansion owes itself to modest increases throughout the seven year expansion. With the exception of 1984, when GNP grew 6.8 percent, growth rates stayed below 5 percent. As a result of moderate expansion and ample capacity, inflation remained low. At the start of the decade, the 1980 Consumer Price Index expanded 13.5 percent. In 1989, the Consumer Price Index expanded approximately 5.0 percent.

1989 In Retrospect

1989 fooled many economists. When benchmark forecasts were made at the end of 1988, virtually all of us knew that the first quarter of 1989 would be one of rapid growth. That growth was largely due to the drought impact from 1988. The rebound from the drought added 2.5 percent to the growth rates in the first quarter, leading to a total gain of 3.7 percent. The disagreement among economic forecasters was what would happen after the first quarter. Many called for a downturn in the second, third, or fourth quarter. More optimistic forecasters believed that the recession wouldn't start until 1990, while still others insisted that there would be no recession. The holdouts have been correct to date. The second and third quarters of 1989 showed respectable growth rates of 2.5 percent to 3.0 percent, respectively. Data from the fourth quarter indicate some weakness. Given the weak auto sector and poor October trade figures, it is conceivable that the fourth quarter will show negative growth. At this writing, however, it looks likely that growth should be about 1 percent at annual rates.

Energy prices ran up in mid 1989 and quickly ran down again. OPEC recently agreed to expand their output, implying a further easing of future prices. We can be somewhat optimistic about moderate inflation in the near term. This allows the Fed to continue its gradualism approach. There have been two notable exceptions to that Fed policy: October 1987 and October 1989. Both exceptions followed major stock market collapses. The Fed's response was to expand money and credit rapidly to signal the financial community that it was willing to expand the economy and neutralize the economic impact from the stock market collapses. Other than those two unique times, the Greenspan Fed has eased rates upward or downward a quarter of a percent at a time. Such gradualism is favored by the business community because it allows banks and businesses to plan their future more accurately.

The Outlook for 1990

What are the prospects for 1990? The consensus view calls for a slow expansion of less than 2 percent in real GNP. Inflation rates should stay the same or decrease slightly from 1989. Continued investments last year allowed capacity utilization rates to fall. That easing in capacity utilization rates eases pressure on industrial prices. Barring unforeseen external pressures, the outlook for inflation is for a moderate reduction in prices for consumer products from the 5 percent area in 1989 to about 4 percent in 1990. A forecast of 1990 quarterly GNP growth rates is presented in Figure 2. The forecast is an ad hoc blend of forecasts from the WEFA Group, the Blue Chip Survey and Data Resources, Inc. and loosely represents a center-of-the-pack view. The equivalent annual growth rate is about 1.7 percent. The basic pattern calls for steady increases in growth once the malaise of the fourth quarter 1989 has passed.

The slow increase in overall activity in 1990 can be broken into major components. Forecasts of key economic variables are contained in Table 1. We expect that the consumption of nondurables and the consumption of services will continue their steady increase. Although it is hard to forecast the growth rates of either one of these components accurately, in recent years the consumption of nondurables tended to be strong when the consumption of services was slow and visa versa. The two components had rates of gain that averaged approximately 3 percent over the last several years.

The more interesting consumer story is the durables sector. A major component of this sector is automobile sales. We have recounted a number of times the pattern of third quarter 1989 auto sales as producers tried to clear their inventories. Dealer incentives worked. Consumers bought automobiles in large numbers. The forecast for dismal durable numbers in the next several quarters is due to the extreme increase in durable consumption for the third quarter 1989. In that quarter, durable consumption increased 11.3 percent at annual rates. The one sure forecast is that when the numbers for fourth quarter 1989 GNP are released on January 26, the consumption of durables will be down substantially from third quarter numbers. The 1990 forecast for durable consumption shows moderate quarter-to-quarter gains. Despite those increases, the consumption of durables is not expected to match the peak third quarter 1989 figure at any time during 1990.

The total of auto and light truck sales in 1990 will decrease slightly from 1989. (See Figure 3.) The consumption of durables not only includes auto sales, but also many items related to housing such as household appliances, carpets, and furni-

Figure 2
Real GNP, Quarterly Percent Changes
(Seasonally Adjusted at Annual Rates)

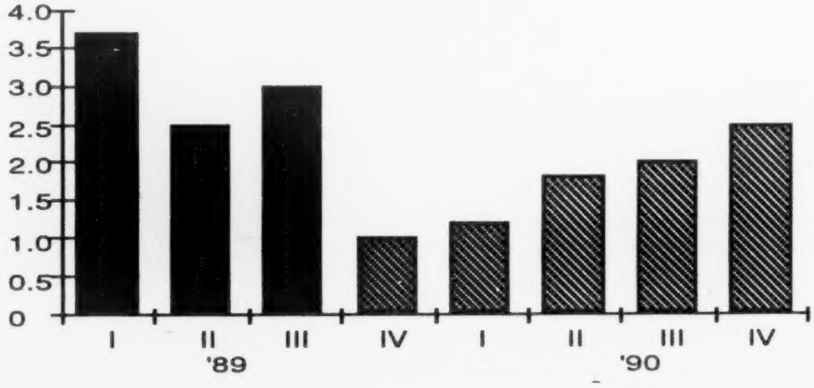


Table 1
National Economic Indicators

	1987	1988	1989	1990
Real GNP (% Change)	3.7	4.4	2.9	1.7
Real Consumption (% Change)	2.8	3.4	2.7	1.8
Auto & Light Truck Sales (Millions of Units)	15.0	15.5	14.9	14.5
Housing Starts (Millions of Units)	1.6	1.5	1.4	1.5
Real Nonresidential Investment (% Change)	3.9	8.4	3.4	2.2
Real Government Purchases (% Change)	2.6	0.4	2.9	1.5
Net Exports ($ Billions, 1982 Dollars)	-115.7	-74.9	-57.0	-55.0

ture. Because the outlook for housing starts calls for a moderate gain in 1990, we cannot expect a rapid rise in the consumer durables related to new housing sales.

The prospects for housing starts in 1990 may be one source of optimism. With mortgage rates in the 9.5 percent range, the demand for new houses may increase. We forecast a moderate increase in housing starts above the 1989 level. (See Figure 4.) Total housing starts are expected to be approximately 1.5 million units. All of that increase likely will be in the single family housing market. Multifamily housing has not recovered from the blow it received from the 1986 tax reform.

The other area where there may be some room for optimism is nonresidential investment. Within this category are two important items: structures and producers' durable equipment. Structures investment in 1989 likely will show an overall decrease from 1988 levels. Producers' durable equipment, however, increased in the first three quarters of 1989. At this writing, expectations are that producers' durable equipment will decrease in the fourth quarter of 1989. With reduced demands from a slowing economy, it is reasonable to expect that investment in either structures or equipment will moderate. There is less reason to build capacity in a slowing economy than in a rapidly expanding economy. There is no clear consensus on the rates of gain for either structures or equipment. Structure investment probably will end its decline and flatten. The prospects for a strong positive gain are slim. Producers' durable equipment has seen healthy growth rates in recent years, but likely will slow from that pace. We expect the increase in durable equipment to be 3 percent or less.

Within the government sector, the state and local component is the biggest item. It is characterized by steady growth. The federal government sector tends to be more erratic. There is considerable interest in the possible peace dividend from the liberalization of Eastern Europe, although this dividend may not be harvested in 1990. The peace dividend is a long-term issue. There is some question whether we have spending alternatives that can replace sizeable cuts in defense spending. We need not fear that we will have no worthwhile projects. One program would be rebuilding public facilities, both interstate highways and other roads and bridges. Others will push for increases in welfare spending or an escalation of the war on drugs. Still others would like to see a substantial reduction or elimination of the federal deficit. There is no shortage of ideas of how to spend the peace dividend.

The last major component of GNP is the most difficult to forecast—net ex-

Figure 3
Auto Sales

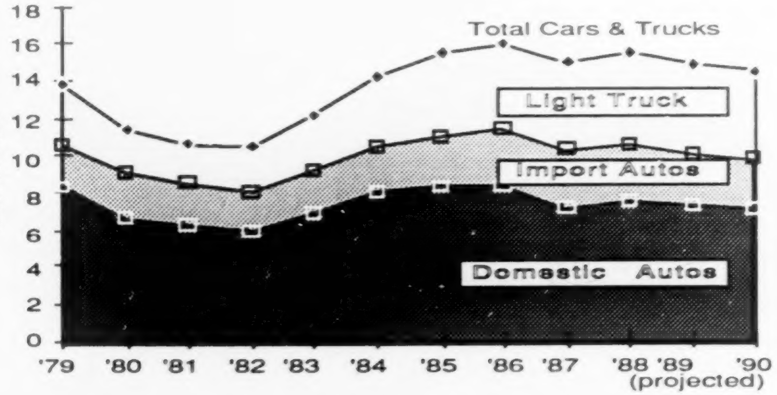
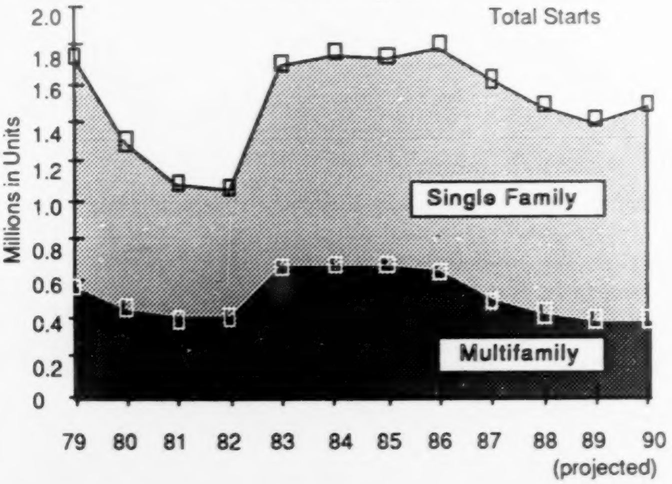


Figure 4
Private Housing Starts



ports. Net exports are the balance of exports and imports. The liberalization of Eastern Europe may affect the net export number. In the short term, there likely will be an increase in the demand for oils and meats as Eastern Europe restructures its diet. Shipping more food to Eastern Europe is a short- to intermediate-term prospect. In the long term, Eastern Europe can be self-sufficient in agriculture, perhaps even a competitor of the U.S. If the new governments of Eastern Europe are able to reorganize their agriculture, there could be a substantial demand for American agricultural equipment.

On the import side, Japan is a major actor. The major component of imports from Japan is automobiles. In the long term, an increased number of Japanese vehicles will be supplied from domestic Japanese plants. Initially, the U.S. Japanese plants are doing domestic final assembly of Japanese parts. In the long term, that may change to domestic assembly of domestically made parts for Japanese vehicles. The impact of the Japanese plants eventually may be similar to domestic auto plants today, except that profits may be exported to Japan rather than staying within the domestic economy. In the short term, I expect a small gain in imports of Japanese cars. Overall, the thirst for imports should slacken as the growth rate of personal income falls in 1990. Should the dollar continue its current decline, then I would expect the net export situation to improve marginally in 1990. The consensus forecast of the Blue Chip Indicators calls for a slight improvement in net exports. The forecasts within the consensus, however, have a range of $46 billion. WEFA Group shows a worsening, while Data Resources shows improvement. The spread shows the difficulty of forecasting this category.

About This Month's Review and Outlook . . .

Data for Tables I and II were not available at press time. Data for Table IV and Figure I are preliminary and may be revised.

Table III
Price Indices

	November 1989	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U* (1982-84 = 100)			
All Items	125.9	4.7	4.8
Commodities	118.3	4.2	4.7
Services	134.1	4.9	4.9
Producer Price Index (1982 = 100)			
Finished Goods	114.8	4.6	5.2
Intermediate Materials	112.2	2.9	4.9
Crude Materials	102.3	8.8	7.3
Ag Prices Received (1977 = 100)			
Nebraska	155	2.0	6.7
Crops	127	-5.9	13.6
Livestock	173	6.1	3.6
United States	147	2.1	7.0
Crops	129	-5.1	8.1
Livestock	163	7.9	6.3

U* = All urban consumers
Source: U.S. Bureau of Labor Statistics

Table IV
City Business Indicators
September 1989 Percent Change from Year Ago

	Employment (1)	Building Activity (2)
NEBRASKA	-0.6	14.5
Alliance	-0.2	-73.6
Beatrice	-1.1	12.7
Bellevue	-0.7	-23.3
Blair	-0.7	101.0
Broken Bow	-1.4	-83.0
Chadron	-3.7	163.3
Columbus	0.2	55.2
Fairbury	-0.7	-82.6
Falls City	-1.6	-3.6
Fremont	-1.1	68.5
Grand Island	-0.9	4.5
Hastings	-0.4	-58.3
Holdrege	-1.3	322.4
Kearney	-0.1	-12.6
Lexington	0.5	506.8
Lincoln	-0.1	51.0
McCook	-0.4	5.7
Nebraska City	-1.2	373.2
Norfolk	-0.7	76.0
North Platte	-0.4	5.6
Ogallala	-1.5	-22.6
Omaha	-0.7	-7.1
Scottsbluff/Gering	-1.9	5.1
Seward	-0.2	9.5
Sidney	0.3	-64.5
South Sioux City	-0.9	-14.5
York	-1.6	-27.1

(1) As a proxy for city employment, total employment (labor force basis) for the county in which a city is located is used

(2) Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes

Sources: Nebraska Department of Labor and reports from private and public agencies

Figure I
City Business Index
September 1989 Percent Change from Year Ago

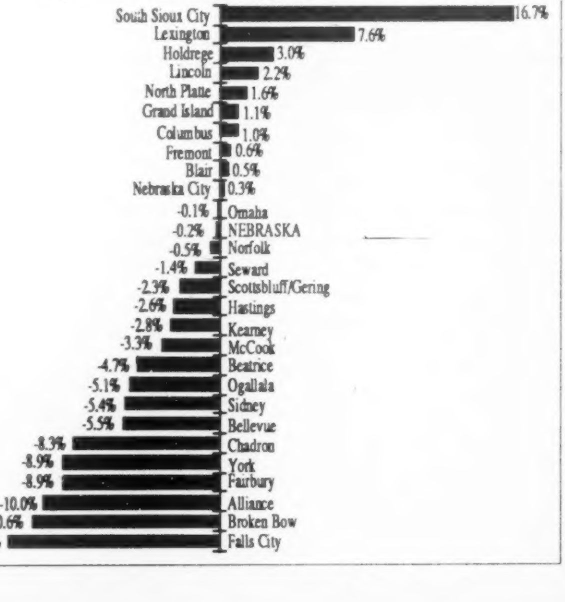
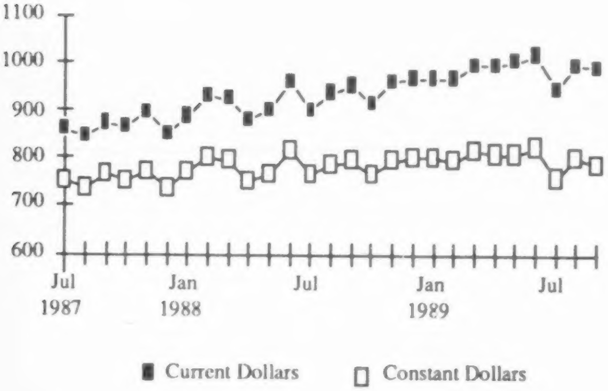


Table V
Net Taxable Retail Sales of Nebraska Regions and Cities

Region Number and City (1)	City Sales (2) September 1989 (000s)	City Sales (2) % Change vs. Year Ago	Region Sales (2) September 1989 (000s)	Region Sales (2) % Change vs. Year Ago	YTD % Change vs. Year Ago
NEBRASKA	$891,072	2.3	1,029,706	3.7	7.2
1 Omaha	305,053	5.1	383,012	5.8	9.0
Bellevue	12,620	-5.4	*	*	*
Blair	4,388	-2.1	*	*	*
2 Lincoln	121,173	4.3	141,441	5.4	4.6
3 South Sioux City	6,328	45.4	8,336	30.4	7.4
4 Nebraska City	3,441	-11.8	18,578	-1.3	1.6
6 Fremont	15,848	0.5	30,657	4.3	5.3
West Point	3,038	11.0	*	*	*
7 Falls City	1,837	-22.1	8,647	-8.7	-1.1
8 Seward	4,188	-0.2	15,210	1.2	2.2
9 York	6,006	-11.8	14,263	-11.3	6.8
10 Columbus	14,412	0.9	26,804	0.2	5.2
11 Norfolk	18,542	-2.9	34,061	-1.8	6.4
Wayne	2,753	-4.0	*	*	*
12 Grand Island	35,248	6.8	49,696	3.7	8.6
13 Hastings	15,796	8.0	25,790	7.6	7.7
14 Beatrice	7,078	-7.3	17,075	-0.5	0.5
Fairbury	2,696	3.4	*	*	*
15 Kearney	17,951	-1.2	26,856	1.2	9.0
16 Lexington	5,793	0.8	15,985	0.5	6.0
17 Holdrege	4,106	-3.9	8,182	3.1	6.2
18 North Platte	16,208	7.5	21,227	10.0	5.8
19 Ogallala	5,374	-3.7	11,400	2.0	11.5
20 McCook	7,278	-4.1	10,969	-2.7	3.2
21 Sidney	3,719	2.6	8,007	1.0	1.6
Kimball	1,620	-4.5	*	*	*
22 Scottsbluff/Gering	16,902	-0.2	24,615	1.0	9.2
23 Alliance	4,695	-4.4	13,173	-3.2	1.5
Chadron	2,191	-22.6	*	*	*
24 O'Neill	4,027	5.9	14,078	4.3	11.1
Valentine	2,467	4.6	*	*	*
25 Hartington	1,257	-13.5	7,963	-8.2	0.3
26 Broken Bow	3,219	0.6	11,938	-1.5	5.4

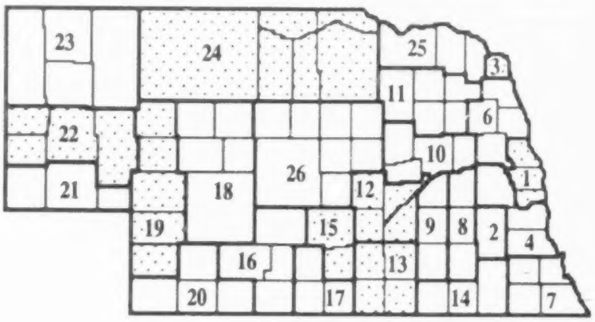
(1) See region map
(2) Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales
* Within an already designated region
Compiled from data provided by the Nebraska Department of Revenue

Figure II
Nebraska Net Taxable Retail Sales
(Seasonally Adjusted, $ Millions)



(1) The Consumer Price Index (1982-84 = 100) is used to deflate current dollars into constant dollars

Figure III
Region Sales Pattern
YTD as Percent Change from Year Ago



Shaded areas are those with sales gains above the state average. See Table V for corresponding regions and cities

Alternative Scenarios

We examine two scenarios to see if either can be rejected. The first is the recession forecast. With a forecast of low growth, it is hard to envision a recession. The usual scenario of overextension, followed by inflation, followed by a Federal Reserve overreaction is not at hand. The recession forecasters base their projections on the idea that the expansion will run out of gas. There will be no driving force behind the economy, and a collapse will ensue. This scenario has no theoretical basis and does not characterize modern U.S. recessions. Standard business cycle analysis tends to follow the line of an external shock of some kind followed by a bad policy reaction—usually on the part of the monetary authorities. Examples of an external shock could be rapid increases in oil prices; a sudden collapse of exports; or an external inflation in some primary materials critical to our economy. An example of an internal shock would be the automobile industry going into a prolonged tailspin. A possible scenario for the last example would be for domestic auto makers to go for high profit rates per vehicle and allow production rates to fall. Falling production rates would result in substantial decreases in employment and purchases of the auto sector. Examples of bad policy reactions almost always are attributed to the Fed. The Greenspan Fed has shown the ability to react well to crisis and to moderate its policies at other times. It also is conceivable that the government could react poorly. For example, in the depression of the 1930s the federal government originally reacted by cutting rather than expanding spending. If the situation arose where a major increase in federal spending was needed to offset a major downturn in consumer spending, I doubt that we would get it. Instead the federal government would focus on deficit reduction.

Hard evidence of a recession in the near future just isn't there. Main proponents of the imminent recession theory tend to use the running-out-of-gas scenario. There are some external shockers out there, but even the external shock advocates need inappropriate reaction from the Federal Reserve or the federal government to bring its downturn. To reject the possibility of recession, one must state that there is a zero chance of an unforeseen negative outside influence. Few of us are so muddled as to assign such a low probability to unforeseen events. I place the possibility of a recession into the 10 percent to 20 percent range.

What of the possibility that 1990 will be a boom year? One pressing need is in public facilities improvements. Any proposed expansion will encounter the problem of the Gramm-Rudman ceiling. There is a demand for improving public facilities, but it is uncertain that the government will be willing to spend the money. A 1990 boom year based on a rapid expansion of public investment is dubious.

What of a major expansion of the private sector? One possibility is a substantial improvement in the housing market, well beyond the small increase we envision. Less than double digit mortgage rates should encourage the home buyer. If incomes are stronger than we envision, there could be a substantial increase in housing starts. There is ample capacity to handle any increase in demand.

A boom in private nonresidential investments is unlikely. Although an easing of interest rates will stimulate investment, low rates of economic growth discourage plant expansion. Solid evidence of a turnaround in overall growth will be needed to stimulate overall investment.

Last, the likelihood that the auto sector will rebound in 1990 and lead us from the slow growth doldrums is small. Motor vehicle sales have been high for several years. The average age of the automobile on the road is relatively young.

The outlook for a boom in 1990 hangs on the thin reed of a major expansion in the residential housing area. The rebuilding of America's infrastructure is a much longer-term program, unlikely to accelerate in 1990. The volatile consumer durable sector is likely to remain below 1989 levels. Thus, a real boom is unlikely; therefore, the chance of runaway growth may be near zero. Let's assign a 10 percent probability to this scenario.

The low probability of the extremes gives the muddling through forecast further credibility. It is most likely that 1990 will be a year characterized by slow growth. We should view 1990 as a coach would a losing team—as a rebuilding year. The soft landing is at hand.

Business
in
Nebraska

PREPARED BY BUREAU OF BUSINESS RESEARCH
Association for University Business & Economic Research

Business in Nebraska is issued as a public service and mailed free of charge upon request to 200 CBA, University of Nebraska-Lincoln, Lincoln, NE 68588-0406. Copyright 1990 by Bureau of Business Research, University of Nebraska-Lincoln. ISSN 0007-683X.

January 1990, Volume 45 No. 544

University of Nebraska-Lincoln-- Martin Massengale, *Chancellor*
College of Business Administration--Gary Schwendiman, *Dean*

Bureau of Business Research
F. Charles Lamphear, *Director*
Merlin W. Erickson, *Research Associate*
Margo Young, *Communications Associate*
John S. Austin, *Statistical Coordinator*
Barbara Sumsion, *Composing Technician*
Lisa Darlington, *Secretary*
Dave DeFruiter, *Information Systems Coordinator*

The University of Nebraska-Lincoln does not discriminate in its academic, admission, or employment programs and abides by all federal regulations pertaining to same.

Nonprofit Org.
U. S. Postage
PAID
Lincoln, Nebraska
Permit No. 46

CONGRESSIONAL INFO SERVIC270238
SRI BR
4520 EAST-WEST HWY
BETHESDA, MD 20814

U786U-1

Business In Nebraska

February 1990
Vol. 45 No. 545

Prepared by the Bureau of Business Research
200 College of Business Administration
University of Nebraska-Lincoln
Lincoln, NE 68588-0406
402/472-2334

Banking in Nebraska: Part 3
The Agricultural Credit Markets

Andrew Pitcher
Graduate Assistant, UNL Bureau of Business Research

Introduction

Agricultural finance has undergone fundamental changes in the last decade as the farm economy struggled amid the pressures of rising interest rates, lower commodity prices, and fluctuating land costs. An earlier article showed the impact of agricultural lending on Nebraska commercial banks. The impact of agricultural lending, however, extends beyond the commercial banking system.

Agricultural lending involves a mix of public and private institutional funds. The principal institutions involved in ag lending are the Farm Credit System, the Farmers Home Bank, commercial banks, and insurance companies. Although the dominant holder of real estate debt for Nebraska farmers is still the Farm Credit System, the mix has altered significantly over the last decade. At the beginning of the 1980s, farm debt was rising rapidly. The dominant supplier of agricultural credit was the Farm Credit System. By the close of the decade, the Farm Credit System had been restructured and debt levels reduced, resulting in commercial banks assuming a greater share of farm debt.

Figure 1 shows the contribution of the major agricultural credit institutions to total farm debt in Nebraska since 1974. For most categories, farm lending peaked around 1983 and then dropped sharply. Commercial bank lending did not fall as sharply as Farm Credit System lending, however, and has increased in recent years. Each bar in Figure 1 shows total farm debt. For farm real estate debt alone, the share of commercial bank lending to the agricultural sector has risen steadily throughout the 1980s as Farm Credit System lending has declined.

The Farm Credit System

The Farm Credit System (FCS) is a network of cooperative institutions whose objective is obtaining low cost loans for the agricultural sector. The FCS is administered by the Farm Credit Administration, an independent government agency, through a system of twelve Farm Credit Districts.

The FCS prospered in the 1970s when real estate values rose rapidly. Farmers found that with rising farm income expectations and rising farm land values they could profit by increasing debt levels. The logic was that high rates of inflation would cause the value of debt to depreciate in real terms. But the situation did not last. With

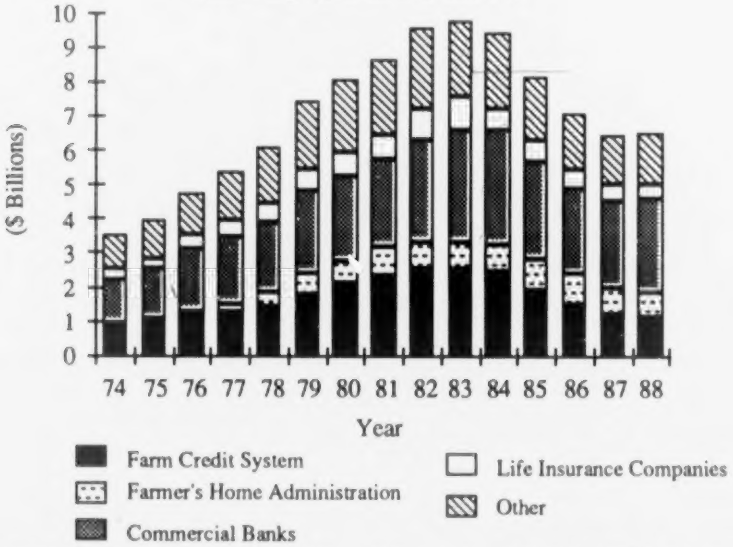
State Economic Scoreboard

Change from same month one year ago.
See Review and Outlook on page 8 for more details.

	State	Metro+	Nonmetro
Motor Vehicle Sales (October) Constant $	↑ 7.1%	↑ 13.7%	↑ 1.7%
Nonmotor Vehicle Sales (October) Constant $	↑ 1.3%	↓ -1.7%	↑ 4.5%
Building Activity (October) Constant $	↑ 18.7%	↑ 14.1%	↑ 24.8%
Employment (December)	↑ 0.4%	↑ 0.1%	↑ 0.7%
Unemployment Rate* (December)	↓ 2.7%	↓ 2.4%	↓ 3.0%

+Omaha and Lincoln. *Unemployment is this month's rate, not a percent change from year ago.

Figure 1
Nebraska Farm Debt
(Including Operator Households)



the collapse of commodity prices, declining land values, and reductions in the rate of inflation and the interest rates, the FCS was confronted with a high debt burden.

Further exacerbating the problem for the FCS was the way FCS priced its loans. Loans were priced according to the average rate paid on the FCS's total portfolio of bonds and notes outstanding. Those prices did not correspond to the costs the system had to pay at the time the loan was made. Furthermore, the FCS traditionally had valued land on the basis of current prices of output. In a highly cyclical market such as the agricultural market, such a policy further distorts the cyclical variations in income. A better policy would be to value land based on historical long-term prices and output.

Following losses of $4.6 billion between 1984 and 1987, a federal bail-out provided $4 billion to the Farm Credit System. Although FCS institutions achieved a net income of $704 million in 1988, that figure was only possible with the aid of a $680 million reversal in provisions for loan losses.

Important to the Nebraska farm economy were the financial difficulties experienced by the Omaha Federal Intermediate Credit Bank (FICB) during mid-1984 to mid-1985. These difficulties were a result of the downturn in the farm economy in the states served by the Omaha FICB (Nebraska, Iowa, South Dakota, and Wyoming). In October 1985, the Omaha FICB received a $75 million payment from the FCS. In addition, it was agreed that the FCS would purchase around $240 million of nonperforming loans from the Omaha FICB.

FCS lending for Nebraska real estate fell around 7 percent in 1988, compared with a decline of nearly 20 percent in 1987. These decreases were generally in line with those at the national level.

Farmers Home Administration

As the lender of last resort, the Farmers Home Administration (FmHA) loan portfolio is dominated by relatively high risk loans.

Prior to 1985, the FmHA exercised a policy of extreme loan foreclosure forbearance. Therefore, there were very low farm loan losses reported by the agency. Foreclosures did increase in 1986 and 1987. The agency was unable to foreclose on nonperforming loans, however, because it was restricted by both Congress and the courts. Consequently, the FmHA reported low loan losses as they held an increasing number of delinquent loans.

The FmHA is still under considerable financial pressure. A recent survey by the USDA Economic Research Service showed that commercial banks have increased their farm lending substantially due to their participation in the farm loan guarantee programs of the Farmers Home Administration. Under the loan guarantee programs, FmHA pledges to repay up to 90 percent of the outstanding principal and accrued interest on FmHA-approved, privately extended loans that default.

Life Insurance Companies

Although life insurance companies still hold a significant portion of farm debt, they have reduced their share of the farm loan market in recent years in an attempt to deal with problem farm loans. Until recently, few life insurance companies were pursuing new farm loan business.

There is some evidence, however, that the period of retrenchment may be coming to a close. The farm lending portfolio of life insurance companies is now in a healthier position, allowing some life insurance companies cautiously to extend credit to high quality farm borrowers.

Commercial Banks

Agricultural banks are defined as those commercial banks with greater than 25 percent of their lending portfolio in agricultural loans. With the current improvement in the performance of the farm economy, commercial banks are able to assume increased levels of agricultural debt.

An additional factor contributing to the increase in commercial bank lending has been their participation in the farm loan guarantee programs of the Farmers Home Administration.

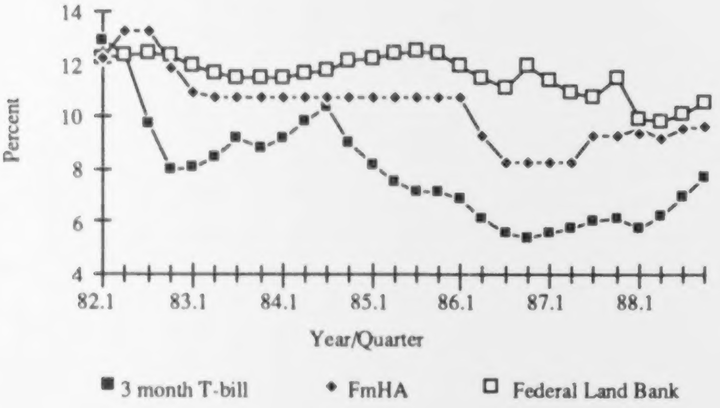
While the value of total farm real estate debt decreased more than 28 percent from 1983 through 1988, commercial bank ag real estate debt rose 233 percent during the same period for Nebraska.

For the United States, commercial banks continue to dominate the market for nonreal estate debt. Nonreal estate debt provides financing for other farm capital items such as farm equipment. At the end of 1988, commercial banks contributed 63 percent of Nebraska nonreal estate lending and 45 percent of nonreal estate lending for the United States as a whole.

Economic Factors

Volatile interest rates and declining farm real estate values may have been the most significant factors affecting agricultural credit in the 1980s. The Farm Credit System in particular suffered because of certain institutional factors. Because the

Figure 2
Agricultural Interest Rates



FCS is a cooperative and its owners are its borrowers, the system traditionally tried to charge the lowest rate possible on loans. Its low interest rate policy allowed the FCS to expand more rapidly than its competitors in the 1970s. Also, because the FCS is restricted in its lending activities to agriculture, it is especially vulnerable to changes in the performance of the agricultural sector. Furthermore, a maturity imbalance has created difficulties when interest rates are volatile. Typically, the Federal Land Banks issue mortgages with terms of 20 years or more. In contrast, bonds sold by the FCS usually have maturities of only three to seven years. Consequently, the FCS has been exposed to significant interest rate risk. Figure 2 illustrates the extent of the interest rate shifts that occurred during the 1980s. The federal credit agencies may not have adjusted their rates quickly enough to reflect changing market conditions.

The Agricultural Credit Act of 1987

With the Agricultural Credit Act of 1987, the FmHA was given the authority to foreclose delinquent loans if the loan cannot be restructured.

The Agricultural Credit Act of 1987 provided relief for the FCS by supplying up to $4 billion in direct financial assistance. Furthermore, the Farm Credit Act of 1987 restructured the FCS. Merging operations within FCS provided one stop servicing of borrowers' long- and short-term credit needs. In addition, further mergers within the FCS were intended to reduce the system's overhead costs.

Another change provided by the Agricultural Credit Act of 1987 was a bill of rights for farmers borrowing from the FCS and FmHA. The legislation detailed procedures these institutions must follow in dealing with troubled loans.

Farmer Mac

An important development for suppliers of agricultural credit has been the establishment of the new Farmer Mac secondary market for farm mortgage loans under the Agricultural Credit Act of 1987. Farm mortgage sales on the secondary market were to provide lenders with the liquidity to make additional investments. The additional liquidity should make the farm mortgage market more competitive and, therefore, provide cheaper financing for farmers.

It is too early to judge the impact of Farmer Mac on the agricultural credit markets. Although an offering of Farmer Mac stock was completed in December 1988, the final standards for qualifying loans to be sold through Farmer Mac have yet to be determined. It is likely that the Farmer Mac system will take two or three years to reach full operation. It is clear, however, that Farmer Mac will offer new opportunities for agricultural lending institutions. Lenders participating in the secondary market can sell 90 percent of the value of loans that meet Farmer Mac's underwriting standards.

Commercial banks are often reluctant to offer many farm loans because of the large principal required. These banks may benefit from Farmer Mac, as it will give lenders the opportunity to recover most of the principal.

Similarly, Farmer Mac will provide life insurance companies with a mechanism providing high quality loans without having to pay a field force to sell and serve the loans. Also, despite the possibility of increased competition, Farmer Mac will assist the FCS by helping build capital by selling some of its loans.

Implications for Nebraska

Nebraska's links to the farm economy are inescapable. The financial position of Nebraska's farms has improved markedly over the past few years. Despite the presence of the drought, Nebraska farm income rose in 1988, and debt fell. Other states hit harder by the drought experienced a greater debt burden.

Table 1 shows the distribution of Nebraska's farm debt. Commercial banks now hold the major portion of the state's farm debt, with most debt concentrated in the form of nonreal estate debt.

Table 1
Distribution of Nebraska Farm Debt, by Lender
December 31, 1988

	Type of Debt		
Lender	Real Estate (Percent of Total)	Nonreal Estate (Percent of Total)	Total
Commercial Banks	9.18	32.94	42.12
Farm Credit System			
Federal Land Banks	15.31		15.31
Production Credit Associations		1.62	1.62
Farmers Home Administration	6.21	5.36	11.51
Life Insurance Companies	6.67		6.67
Individuals and Others	10.43	12.26	22.69
Commodity Credit Corporation	0.02		0.02
Total	47.80	52.20	100.00

Nebraska's Farm Credit System debt is administered by the Farm Credit Bank of Omaha (FCBO), Federal Land Bank Association of the Midlands (FLBAM), and the Production Credit Association of the Midlands (PCAM).

For the year ended December 31, 1988, the Farm Credit Bank of Omaha and related associations achieved a surplus in excess of $176 million, a 4 percent return on average assets. The positive return contrasts to a $105 million loss in 1987. Even though interest income was lower, interest expense fell dramatically, leading to a return to profitability. Furthermore, a $271 million reversal in the provision for loan losses allowed made a major contribution to reported profitability. The reversal in the provision for loan losses was possible due to the backing of the Farm Credit Administration.

Outlook

The outlook for agricultural lending has brightened considerably in recent years. Farm debt reached alarming levels in the mid-1980s as the farm economy was afflicted with deteriorating commodity prices. The level of debt has been reduced through an improvement in the farm economy and a restructuring of the agricultural credit system. These structural and institutional changes within the agricultural credit sector have resulted in commercial banks becoming the leading farm lender, holding over one-third of total farm debt.

The outlook for the FCS depends not only on the agricultural economy, but also on the structure of the FCS. With the FCS now holding only approximately one-fourth of total farm debt, there have been moves from the FCS to expand its role in agricultural finance to compete directly with the services of commercial banks. Commercial banks have resisted these moves, claiming that they would be unable to compete fairly with the FCS because the FCS is government owned.

The improvement in the farm economy and the increase in federal assistance have provided some stability to the financial condition of the FCS. The Farm Credit System, despite restructuring, still remains vulnerable to wide swings in agricultural income. The introduction of Farmer Mac should provide further stimulus to competition in the ag credit markets.

Toward Fuel Efficiency

According to the *Monthly Energy Review*, a publication of the Energy Information Administration, U.S. Department of Energy, the average amount of fuel consumed per passenger car in the U.S. has declined about 30 percent during the last 20 years. In 1968, the average fuel consumption per car was 731 gallons. This figure increased to 785 gallons by 1972. Beginning in 1972, the average has declined steadily to an estimated 507 gallons in 1988.

The *Monthly Energy Review* also provides statistics about the average miles travelled per car per year. Average net consumption, use, and efficiency are shown below for the period 1967 through 1988. Passenger car efficiency improved from 14.07 miles per gallon at the beginning of the period to 19.95 miles per gallon in 1988.

Passenger Car Efficiency

Year	Average Fuel Consumed per Car (gallons)	Average Miles Traveled per Car (miles)	Average Miles Traveled per Gallon of of Fuel Consumed (mpg)
1967	715	10,060	14.07
1968	731	10,144	13.87
1969	746	10,158	13.62
1970	760	10,272	13.52
1971	770	10,422	13.54
1972	785	10,521	13.40
1973	771	10,256	13.30
1974	716	9,606	13.42
1975	716	9,690	13.52
1976	723	9.785	13.53
1977	716	9,879	13.80
1978	701	9.835	14.04
1979	653	9,403	14.41
1980	591	9,141	15.46
1981	576	9,186	15.94
1982	566	9,428	16.65
1983	553	9,475	17.14
1984	536	9,558	17.83
1985	525	9,560	18.20
1986	526	9,608	18.27
1987	514	9.878	19.20
1988*	507	10,119	19.95

*Preliminary data

Merlin W. Erickson

About Business in Nebraska . . .

Business in Nebraska is published monthly and distributed free of charge within the state. Call 402/472-2334 to add your name to our mailing list.

Nebraska Television--Forty Years Old and Growing

Louis E. Jeffries, Wesley College

Introduction

In 40 years Nebraska television has grown to include 15 commercial stations, nine educational stations and satellite stations, and 177 cable TV systems. Today, more than 98 percent of Nebraska's households have television sets.

Omaha is the largest market in the state, according to the 1986-87 Arbitron report. Nationally ranked as 64th, this market serves more than 354,000 TV households.

Lincoln, Hastings, Kearney, and Grand Island form the state's second largest television market, ranked 92nd nationally. More than 257,000 households are contained in this market.

Cable television covers 247 communities in the state. By April 1, 1988, the Omaha market had nearly 71,000 basic cable subscribers. The Lincoln market counted almost 62,000 subscribers to basic cable service, according to the *Television and Cable Factbook.*

Nebraska's television industry accounts for an average of 22 percent of all advertising expenditures in the state. Net television revenues in Omaha and Lincoln for 1987 totalled nearly $53 million.

Early History of Nebraska Television

Nebraska's television industry was born in August 1949, when two Omaha stations signed on the air. Intense competition began, which continues to characterize the television industry in Omaha and throughout Nebraska. Two individuals largely responsible for introducing television to Nebraska are John J. Gillin, Jr. and Ed May, Sr.

Gillin, Omaha native and general manager (later president) of the WOW radio station, is credited with bringing television to the Midwest in 1949 with the founding of WOW-TV. The station began transmitting programming directly from the network via the new coaxial cable a short time later. May, a radio veteran with an Iowa station, gambled on television and established KMTV. Nebraska television stations provided early on-the-job training for television personalities Johnny Carson, Floyd Kalber, and Tom Brokaw.

Television continued to grow in Nebraska. An Omaha ABC affiliate began operation in September 1957. The Omaha stations opened Lincoln news bureaus between 1976 and 1981. Other stations gradually were added in Lincoln and western Nebraska.

Nebraska was one of the first states to offer educational television. KUON, a Lincoln station, was founded in 1954. During the 1960s, public TV expanded to cover the entire state.

Recent Changes in Nebraska

The age of modern television emerged in 1962, when the Telstar I satellite was launched. Within hours, the satellite had bounced TV programs between the U.S. and Europe. The proliferation of satellite-fed programming accelerated in 1975 when Home Box Office began transmitting its pay TV programming by satellite.

The last group of first generation television pioneers, both in Nebraska and at the national networks, have disappeared in recent years. The last Nebraska broadcast pioneer departed when May sold KMTV in August 1986. The sale ended his 37 year presence in Omaha television.

More significant changes in Nebraska's commercial television industry occurred in 1985 and 1986 than in the preceding 23 years.

The first Omaha independent station, KPTM, began broadcasts in April 1986, the first new commercial television station in Omaha since 1957. Until that time, the Omaha-Lincoln market was the largest television market in the country without a local independent station.

Within four months, the new station became the country's top rated prime time independent television station in a mixed market. A mixed market refers to one in which both UHF and VHF stations compete. The influence of an aggressive and successful new competitor invigorated the Omaha market.

In western Nebraska, television became available in 1955. Previously, only low quality television reception from Cheyenne, Wyoming had been possible for area residents. KSTF in Scottsbluff provides programming to about nine counties in Nebraska's Panhandle.

The Scottsbluff area currently has only two commercial television stations. The third network is available via cable or satellite dish. The Panhandle has heavy cable TV penetration, carrying the Denver stations. Backyard satellite dishes in the rural areas have proliferated.

Regulatory Changes and Technological Innovation

At the national level, corporate control at the three networks has passed to a new generation of executive personnel concerned about cost control and fiscal responsibility. In 1985, corporate control changed at all three networks.

A number of factors can explain these changes. Network leadership had aged. A lack of strong successors resulted in frequent executive turnover and lack of stability for the future.

Deregulation by the FCC precipitated major changes in the broadcast industry, including more liberal programming content and a greater number of commercial spots allowed per program.

An FCC rule barring rapid buying and selling of station licenses for profit was abolished, leading to a rapid turnover in station ownership. In addition, a single group of owners now can own 12 stations, rather than the previous limit of seven stations, providing the coverage does not exceed 25 percent nationally.

In Nebraska many affiliate stations have been sold in recent years as their open market value rose. Most were purchased by large groups, who apparently can achieve economies of scale with multiple station ownership.

Although Nebraska residents founded the state's television industry, most of Nebraska's commercial stations now are owned by out-of-state individuals or groups. According to a survey conducted by Michael Hilt, University of Nebraska-Omaha professor, only one of six stations responding was owned by a Nebraskan residing in the state.

Television programming alternatives also have proliferated in the past five years, fragmenting the television audience. The combined prime time market share of the three major networks has dropped from 91 percent in 1980 to 67.2 percent in the 1988-1989 season. This market share decline is likely to continue, leveling at about 63 percent to 65 percent by 1995.

Industry trends contributing to this decline include a continuing increase in the number of cable subscribers and growing public television viewership. The number of independent TV stations has increased, and their ratings have risen.

Videocassette recorder sales, representing another entertainment alternative, have risen from zero to over 36 million in recent years. Feature film rentals for VCRs have cut ratings potential for these films on commercial television, resulting in an increase in made-for-TV films and original programming on independent stations.

Backyard satellite dishes have appeared in rural areas such as Nebraska's central and Panhandle areas. This technology, virtually unknown ten years ago, is now available in more than two million homes in the U.S.

Other technological advances of the last ten years have made these alternative programming forms possible. Programming now can be transmitted via satellite, allowing broadcast of timely syndicated shows, daytime talk shows, and regional programming.

Future Effects of Changes

Both networks and local stations face added competition in bidding for programs, further squeezing profits. With an increasingly fragmented viewing audience, the television industry is forced to reduce expenses and achieve other economies to maximize profits.

Advertisers have other avenues for their commercials. As a result, the three networks and local affiliates no longer can expect double digit advertising rate increases to cover rising costs.

An example of cost cutting efforts is in the current proliferation of weekly news magazine programs. These programs are much cheaper to produce than the typical hourly programs they replace.

Cable stations show profits by producing cheaper programming and drawing revenues from both the cable systems carrying their programming and from the commercial spots they broadcast.

Another consequence of recent changes has been the general disruption of viewer habits. Today, an interruption of these habits can cause viewers to try alternative programming, generating further changes in network market share and profits.

The future of television broadcasting, both nationally and in Nebraska, seems to suggest an industry going in many directions, according to some in the state's television industry.

With satellites and other new technologies being developed, more alternative programming sources and choices will be available, all of which could threaten local stations by fragmenting their audiences. Special ad hoc networks could be formed to broadcast special events.

Networks may tend to program fewer hours, possibly striving for better quality. The traditional three networks may become simply another program service for local stations.

The three major networks have maintained their policy to date of compensating affiliates for carrying network shows and commercials. This key difference between cable and networks accounts for much of cable's attractive profit structure and future potential. Recent developments have indicated that the network practice of compensation to affiliates may have an uncertain future. Networks most likely will reduce or eliminate compensation on programming their affiliates must carry. But this reduction may be balanced by additional spots for local ads.

Should network compensation to the affiliates be altered, local stations may refuse to carry network shows or may preempt the network with alternative programming. In the future, a different kind of partnership between local stations and networks allowing local affiliates and independent stations to carry more first run programming may be formed.

Future technology includes high definition television, with sharper pictures, higher resolution, better color, and stereo sound. It may become possible for consumers to perform banking functions, retrieve information, and conduct other transactions without leaving home. Utilization of these services may reduce viewership of traditional television further.

The future of television promises diversity of choice, bringing greater risks to individual players as viewer loyalty is divided further.

Louis Jeffries is currently an assistant librarian at Wesley College. He previously has published in Business in Nebraska.

Patricia C. Dinslage of the Bureau of Business Research excerpted this article from a longer version.

Nebraska County Seat Facts

The Bureau of Census, U.S. Department of Commerce estimated that Nebraska's population was 1,602,000 on July 1, 1988. Of this total, 911,120 persons or 56.9 percent resided in towns designated as county seats in 91 Nebraska counties. (Harrisburg in Banner County and Tryon in McPherson County are not incorporated.) According to the 1980 census, Nebraska had a population of 1,569,825. County seats contained 891,299 individuals, 56.8 percent of the total.

During the 1980-1988 period, 20 of the 91 county seats gained population. Over the same period, 71 county seats declined in population.

County government often is headquartered in the largest town or city of the county. In 75 of the 91 Nebraska counties, the county seat was the most populous place. The county seat is the second largest incorporated place in 11 counties and the third largest incorporated place in two counties.

Omaha in Douglas County is the most populous county seat with 353,170 residents. Brewster in Blaine County is the smallest county seat with 30 residents.

Thirteen county seats in Nebraska have the same name (or a derivation of the couny name) as the county in which they are located.

Merlin W. Erickson

Status of Venture Capital in Nebraska

Raymond A. Marquardt,
UNL Agribusiness Program Director and Professor of Marketing
and
Diane L. Crawford, Research Technician

What is Venture Capital?

Venture capital may be defined as money supplied to businesses for endeavors in which both the risk and potential return are high. A business may be financed with venture capital during an early stage of development, during expansion, or at the point of acquisition or leveraged buyout.

Venture Capital in Nebraska

Nebraska's venture capital activity level is low. There are currently two small business investment companies (SBICs), one state-chartered quasipublic venture capital company, two venture capital networks, and three venture capital clubs in the state. The venture capital networks and clubs do not make investments, but provide a link to an informal source of financing.

A 1988 study by Samsel, Ball, and Marquardt found that the Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, and Wisconsin) has the smallest representation of venture capital firms, 11.3 percent of the U.S. total. In comparison, New York has over 150 venture capital funds. (Use of these funds is not restricted to New York.)

The study also found that awareness of Nebraska's business climate is generally low among venture capitalists nationwide. These same venture capitalists also rated Nebraska low on the presence of local venture firms, the availability of good venture proposals, and the level of entrepreneurial activity in the state.

In 1985 Nebraska ranked 38th among 48 states in new business incorporations and 37th in patents issued, according to the Corporation for Enterprise Development.

The venture capital industry nationwide has been instrumental in fostering many economic development objectives:

- Job creation;
- Business creation;
- Economic diversification;
- Influx of money to business location;
- Capital availability for enterprises unlikely to be financed through conventional sources.

For example, two state-chartered venture capital entities in Massachusetts have created or retained over 5,000 jobs in that state since 1978. Many of the businesses providing these jobs would not have been started or expanded without the presence of a venture capital industry willing and able to extend equity financing to relatively high risk ventures. For these reasons, venture capital may be an economic development tool in Nebraska.

Meeting Nebraska's Needs

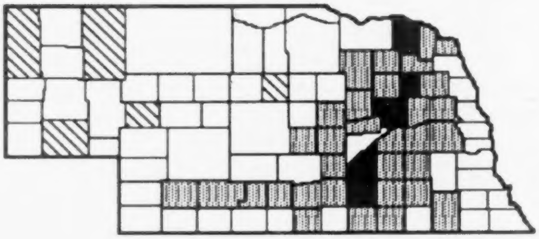
Nebraska's venture capital industry is the focus of various parties in the state concerned with economic development.

The Nebraska Research and Development Authority (NRDA), a nonprofit, state-funded, quasipublic venture capital organization, was formed in 1986 to meet the need for venture capital financing in the state. The NRDA is making investments in Nebraska businesses and providing education to potential entrepreneurs and venture capitalists. They have pro-

(continued on page 8)

Average Age of Nebraska Farmers

The average age of farm operators in Nebraska increased from 48.5 years in 1982 to 49.4 years in 1987, according to the *1987 Census of Agriculture*. In 37 counties, the average age of farm operators was below the state average. Fifty-six counties reported average ages equal to or above the state mean.



Average age of farm operator, Nebraska - 49.4 years

▦ Counties below state average

☐ Counties equal to or greater than state average

▧ Counties with highest average age

■ Counties with lowest average age

The five counties with the highest and lowest average ages are:

Highest Average Age		Lowest Average Age	
Arthur	55.3 years	Platte	46.9 years
Cheyenne	54.2 years	Cedar	47.0 years
Loup	54.0 years	Clay	47.0 years
Sheridan	54.0 years	Stanton	47.1 years
Sioux	54.0 years	Hamilton	47.2 years

Counties reporting the lower average ages tend to concentrate two to three counties wide on either side of a line stretching from Dixon County to Thayer County. Such counties also are concentrated in the second tier of counties above the Nebraska-Kansas state line stretching from Hayes County to Gage County.

Merlin W. Erickson

posed the creation of a separate private fund to be financed initially through a no risk bond issue utilizing public pension fund monies. In addition, a pilot regional venture capital organization to be located in Norfolk is under discussion.

A group of bankers in Omaha is seeking the support of the Nebraska Bankers Association in raising money for the formation of a third SBIC.

Legislation to provide a tax credit for investors in certified venture capital companies has been drafted. Senator Don Wesely's LB577 is out of committee.

The Nebraska Bankers Association has funded several research grants to study the role of venture capital in Nebraska's economic development. Reports entitled "A Guide to Doing Business in Nebraska," "Perceptions Venture Capital Firms Have of Nebraska Projects," and "An Assessment of Venture Capital Delivery Mechanisms and Their Role in the Economic Development of Nebraska" have been completed. (Copies of these reports may be obtained by contacting Dr. Marquardt's office at 402/472-3156.)

The Nebraska Bankers Association recently has awarded another grant to study the need for additional capital delivery mechanisms in the state.

Several organizations and public officials, including the Department of Economic Development, state legislators, Nebraska Futures, Inc., the Nebraska Bankers Association, the State Chamber of Commerce, and representatives of the University of Nebraska, have held meetings to discuss the direction Nebraska should take in venture capital.

The Outlook for Nebraska

These groups are gathering information about venture capital, learning what actions have been taken in other states to employ venture capital as a tool in economic development, and assessing how successful these efforts have been.

Those who can influence the direction of venture capital in the state are aware that fostering managerial skills among business-oriented citizens and educating entrepreneurs and venture capitalists in the process of raising capital for new and growing enterprises are important.

The process of formulating programs, passing the necessary legislation, and implementing such programs takes time. It is clear that Nebraskans are learning the benefits of venture capital and taking positive steps toward activating this form of financing for the good of the state.

U.S. Agricultural Bank Failures

According to the *Agricultural Finance Databook* (fourth quarter 1989) published by the Federal Reserve Board, fewer agricultural banks failed during the first and third quarters of 1989 than during any quarter since early 1984. More than 60 agricultural banks failed annually in 1985, 1986, and 1987. In the first quarter of 1987 alone, 22 failures were noted.

Failures of Agricultural Banks*

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Annual Total
1981	1	0	0	0	1
1982	2	3	3	3	11
1983	1	1	2	3	7
1984	3	7	10	12	32
1985	12	21	17	18	68
1986	14	14	21	16	65
1987	22	19	12	16	69
1988	11	6	12	7	36
1989	5	7	5		

*Data exclude banks assisted to prevent failure. Industrial banks and mutual savings banks also are excluded. Note that the term agricultural bank as defined by the Fed differs from the common definition used on page 2 of this issue. The Fed defines agricultural banks as those that have a proportion of farm loans (real estate plus nonreal estate) to total loans that is greater than the unweighted average of all banks. This average was 16.0 percent in June 1989.

Merlin W. Erickson

Review and Outlook

John S. Austin
Statistical Coordinator
Bureau of Business Research

National Outlook

The newly released fourth quarter GNP numbers verified the overall weakness in the national economy. Real GNP grew only 0.5 percent.

Growth in real consumption was near zero. Within the consumption sector, only the consumption of services grew, while consumption of durables and nondurables fell. Consumption of durables dropped 12.9 percent in the fourth quarter. All of that decrease can be attributed to a drop in automobile sales.

In the investment sector, decreases in nonresidential investment partially were offset by increases in the residential sector. There was a strong gain in business inventories in the fourth quarter. Most of that gain was an unintended increase in inventories due to slack retail sales in the quarter.

Imports outpaced exports in the trade sector, leading to a further worsening of the net export situation. In the government sector, gains in state and local spending partially were offset by decreases in federal spending.

Retail sales reports verify the fourth quarter GNP results. Retail sales peaked in September and fell sharply in October with the drop in automobile sales. In November and December, retail sales increased, but did not regain their September levels.

Because revisions to the advance GNP reports are the rule rather than the exception, we should take these figures with a grain of salt. The fourth quarter results were in line with our expectations. We continue to foresee 1990 as a year of muddling through.

The one source of potential strength in the 1990 economy is the housing market. So far, however, housing starts have not improved. But low interest rates should stimulate the housing market soon. We do not foresee a housing boom, even with lower interest rates, but simply a return to moderate levels. For the most part, the aging baby boomers have purchased their first homes. We foresee the annual rate of housing starts rising to the 1.5 million units range by midyear.

Inflation remains under control. In December, there was a small run in inflation. In spite of the December pattern, the Consumer Price Index showed a gain of 4.8 percent for the year as a whole. December increases were concentrated in energy and food. These jumps appear to be temporary, being largely related to extreme cold weather on the East Coast. Freezing weather destroyed much of the Florida fruit and vegetable crop. Extreme cold in the Northeast caused a severe increase in the demand for oil when inventories were inadequate.

There has been considerable fuss lately over the idea that the Japanese are raising their own interest rates. Many analysts fear that money flows will move from the United States and toward Japan. There is

Table I
Income and Earnings in Nebraska*
($ Millions)

	Fourth Quarter 1987	First Quarter 1988	Second Quarter 1988	Third Quarter 1988	Fourth Quarter 1988	First Quarter 1989	Second Quarter 1989	Third Quarter 1989	% Change 1989:III vs. 1988:III
Income									
Total Personal Income	24,304	23,281	24,214	23,017	24,166	24,969	25,036	24,722	7.4
Nonfarm	21,054	21,312	21,633	21,951	22,507	22,685	23,085	23,514	7.1
Farm	3,250	1,969	2,582	1,066	1,659	2,284	1,951	1,207	13.2
Earnings by Industry**									
Ag. Services, Forestry & Fisheries	149	151	147	144	144	142	149	152	5.6
Mining	57	51	50	49	47	44	47	51	4.1
Construction	882	938	918	887	933	910	927	899	1.4
Manufacturing	2,287	2,350	2,369	2,408	2,438	2,501	2,523	2,611	8.4
Nondurable	1,135	1,149	1,180	1,197	1,206	1,216	1,271	1,331	11.2
Durable	1,152	1,201	1,189	1,211	1,231	1,286	1,253	1,280	5.7
TCU ***	1,614	1,613	1,608	1,641	1,602	1,670	1,635	1,638	-0.2
Wholesale Trade	1,174	1,211	1,237	1,269	1,295	1,315	1,345	1,362	7.3
Retail Trade	1,512	1,545	1,579	1,606	1,636	1,682	1,693	1,706	6.2
FIRE****	1,211	1,189	1,205	1,220	1,241	1,238	1,258	1,298	6.4
Services	3,370	3,334	3,460	3,586	3,837	3,674	3,817	3,996	11.4
Government	2,996	3,046	3,077	3,046	3,148	3,208	3,282	3,331	9.4
Federal, Civilian	468	473	476	480	492	508	515	524	9.2
Military	400	406	402	401	403	417	415	413	3.0
State & Local	2,128	2,167	2,199	2,166	2,253	2,283	2,352	2,394	10.5

* All data are seasonally adjusted at annual rates
** Earnings is the sum of wages and salaries, other labor income, and income earned by sole proprietors
*** Transportation, Communications, and Utilities
**** Finance, Insurance, and Real Estate
Source: Bureau of Economic Analysis, U.S. Department of Commerce

Table II
Employment in Nebraska

	Revised November 1989	Preliminary December 1990	December % Change vs. Year Ago
Place of Work			
Nonfarm	727,020	728,736	3.3
Manufacturing	100,315	101,313	3.7
Durables	48,025	48,084	1.3
Nondurables	52,290	53,229	6.0
Mining	1,821	1,612	7.6
Construction	27,651	25,209	4.5
TCU*	48,719	49,324	4.7
Trade	186,666	188,523	2.5
Wholesale	53,253	53,425	4.6
Retail	133,413	135,098	1.7
FIRE**	49,420	49,597	2.1
Services	170,180	170,560	5.3
Government	142,248	141,905	1.3
Place of Residence			
Civilian Labor Force	823,797	817,538	0.10
Unemployment Rate	2.9%	2.7%	

*Transportation, Communication, and Utilities
**Finance, Insurance, and Real Estate

Source: Nebraska Department of Labor

Table III
Price Indices

	December 1989	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U* (1982-84 = 100)			
All Items	126.1	4.6	4.8
Commodities	118.2	4.1	4.7
Services	134.6	5.1	4.9
Producer Price Index (1982 = 100)			
Finished Goods	115.3	4.8	5.1
Intermediate Materials	112.0	2.3	4.7
Crude Materials	104.0	7.2	7.3
Ag Prices Received (1977 = 100)			
Nebraska	161	3.2	6.5
Crops	127	-8.0	11.5
Livestock	182	9.0	4.2
United States	148	2.1	6.5
Crops	125	-8.1	6.5
Livestock	169	9.7	6.7

U* = All urban consumers
Source: U.S. Bureau of Labor Statistics

no need for alarm. First, it is not clear that the Japanese will make major policy changes overnight. The Japanese tend to focus on the long run in their policy making. Second, even if Japanese interest rate policies are changed, the result is most likely that there will be an increase in funds retained within the country rather than a dramatic increase in inflows into their country. Overall, I expect the result of increased Japanese interest rates to have relatively little impact on our economy.

Nebraska Outlook

Third quarter personal income figures for Nebraska are presented in Table I. Total personal income grew 7.4 percent from third quarter 1988 to third quarter 1989. Nonfarm income increased 7.1 percent, while farm income gained 13.2 percent over the same period. The farm income series is erratic. The strength of the third quarter gain was generated from a low base year figure in the prior year. If year-to-date figures are used, farm income decreased 3.1 percent through the third quarter. For a series as volatile as farm income, a single quarter's data should not be viewed out of context.

In the nonfarm area, income growth was strongest from third quarter 1988 to third quarter 1989 in the biggest subcomponent—services. Service growth of 11.4 percent was followed by nondurable manufacturing growth of 11.2 percent.

As impressive as the increase in Nebraska's personal income was, it did not keep pace with the nation's increase of 8.5 percent from third quarter 1988 to third quarter 1989. The Plains was the fastest growing region in the third quarter with a jump of 9.2 percent. It is unusual for the Plains to lead the nation in income growth. The rapid increases were related to large increases in farm income precipitated by recovery from the 1988 drought. Because Nebraska did not suffer as much from the 1988 drought as did our neighboring Plains states, our farm income rebound was smaller in scope than that of other Plains states.

In contrast to flat figures for total U.S. construction in 1989, construction in Nebraska was a source of strength. Even though December figures were somewhat weak due to cold weather, the year as a

Table IV
City Business Indicators
October 1989 Percent Change from Year Ago

The State and Its Trading Centers	Employment (1)	Building Activity (2)
NEBRASKA	-0.6	19.5
Alliance	-1.6	-75.5
Beatrice	-0.6	26.3
Bellevue	-0.3	22.3
Blair	-0.3	43.0
Broken Bow	-1.2	-71.0
Chadron	-3.1	61.4
Columbus	-0.4	155.6
Fairbury	-0.8	-26.2
Falls City	-1.3	8.7
Fremont	-1.0	61.8
Grand Island	-0.4	-6.1
Hastings	-0.8	-56.9
Holdrege	-0.9	502.3
Kearney	0.0	14.9
Lexington	-0.7	271.1
Lincoln	0.0	40.1
McCook	-0.6	108.4
Nebraska City	-0.7	371.8
Norfolk	-0.6	65.9
North Platte	-1.1	18.4
Ogallala	-1.0	-41.0
Omaha	-0.3	-1.2
Scottsbluff/Gering	-1.4	-37.4
Seward	-1.2	39.8
Sidney	-0.9	-66.7
South Sioux City	-1.8	-49.7
York	-1.1	-21.9

(1)As a proxy for city employment, total employment (labor force basis) for the county in which a city is located is used

(2)Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes

Sources: Nebraska Department of Labor and reports from private and public agencies

Figure I
City Business Index
October 1989 Percent Change from Year Ago

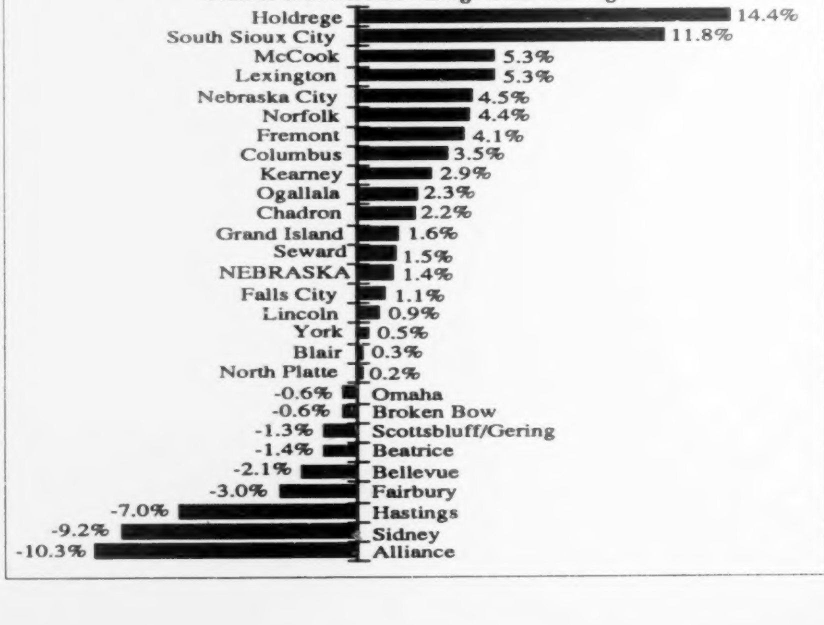


Table V
Net Taxable Retail Sales of Nebraska Regions and Cities

Region Number and City (1)	City Sales (2) October 1989 (000s)	City Sales (2) % Change vs. Year Ago	Region Sales (2) October 1989 (000s)	Region Sales (2) % Change vs. Year Ago	YTD % Change vs. Year Ago
NEBRASKA	847,271	5.9	976,273	6.6	7.2
1 Omaha	287,948	3.0	361,720	4.6	8.5
Bellevue	11,995	-2.9	*	*	*
Blair	4,316	1.0	*	*	*
2 Lincoln	113,008	2.3	132,286	4.2	4.6
3 South Sioux City	5,739	41.5	7,753	34.2	9.9
4 Nebraska City	3,758	-2.3	17,342	4.4	1.9
6 Fremont	15,182	9.3	28,423	7.3	5.5
West Point	2,789	-0.1	*	*	*
7 Falls City	2,284	6.9	8,522	2.9	-0.7
8 Seward	4,153	5.0	14,202	2.7	2.3
9 York	6,295	9.1	13,975	2.5	6.4
10 Columbus	14,006	2.0	25,789	1.9	4.8
11 Norfolk	18,406	9.2	33,324	5.4	6.3
Wayne	3,003	8.7	*	*	*
12 Grand Island	32,899	8.9	46,956	8.2	8.6
13 Hastings	13,858	-1.9	23,350	5.5	7.5
14 Beatrice	6,854	-1.3	16,119	3.2	0.8
Fairbury	2,588	1.3	*	*	*
15 Kearney	18,304	9.3	26,296	10.5	9.2
16 Lexington	5,276	2.4	15,171	6.2	6.0
17 Holdrege	4,380	18.3	7,895	12.9	6.8
18 North Platte	14,554	3.7	18,951	6.1	5.8
19 Ogallala	5,180	16.3	10,507	8.3	11.2
20 McCook	7,607	8.8	10,763	8.5	3.7
21 Sidney	3,510	-4.2	6,855	-11.6	0.2
Kimball	1,353	-15.4	*	*	*
22 Scottsbluff/Gering	16,872	7.8	23,574	5.9	8.9
23 Alliance	4,875	-2.5	12,926	2.6	1.6
Chadron	2,500	6.9	*	*	*
24 O'Neill	4,134	18.6	14,543	18.5	11.9
Valentine	2,576	8.4	*	*	*
25 Hartington	1,571	18.5	8,130	13.6	1.5
26 Broken Bow	3,281	17.9	11,241	7.5	5.6

(1) See region map

(2) Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales

* Within an already designated region

Compiled from data provided by the Nebraska Department of Revenue

Figure II
Nebraska Net Taxable Retail Sales
(Seasonally Adjusted, $ Millions)

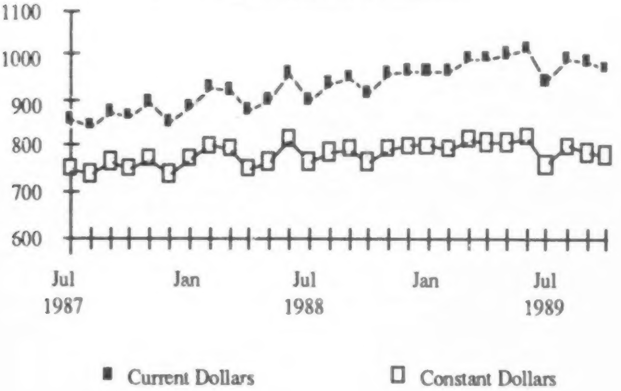
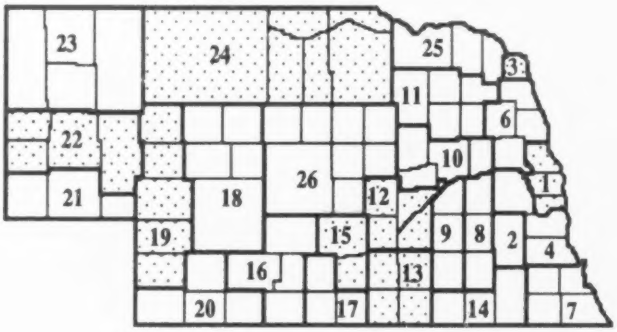


Figure III
Region Sales Pattern
YTD as Percent Change from Year Ago



(1) The Consumer Price Index (1982-84 = 100) is used to deflate current dollars into constant dollars

Shaded areas are those with sales gains above the state average. See Table V for corresponding regions and cities

whole was strong. According to F.W. Dodge, total projects increased 11.9 percent for the year. There was some weakness in nonbuilding construction, but building square footage rose 12.9 percent. The count of dwelling units under construction swelled 9.1 percent for the year.

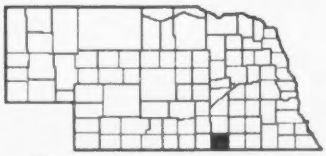
In the West North Central region of the U.S., year-to-date retail sales through November increased 3.5 percent. In contrast, retail sales in Nebraska through October showed a gain of 6.6 percent for the month versus a year ago and a 7.2 percent increase on a year-to-date basis. Nevertheless, Nebraska retail sales have slowed from their torrid pace at the end of the spring months. In Figure II, we see that October seasonally adjusted constant dollar and current dollar retail sales were below the blistering pace of May and June.

Table II reveals that nonfarm employment (jobs) increased in October 3.3 percent versus a year ago. That rate of increase is similar to those we have seen throughout the year for Nebraska jobs. Once again, the labor force failed to keep pace with the job expansion. In December, the labor force barely grew, showing a 0.1 percent increase.

The rapid expansion in jobs and a slow increase in the labor force resulted in a December unemployment rate of 2.7 percent. Nebraska's unemployment rate was below 3.0 percent for the last four months of the year. According to the U.S. Bureau of Labor Statistics (BLS), there were only three states in November that had unemployment rates below 3.0 percent: Delaware and Hawaii had rates of 2.8 percent and Nebraska had a 2.9 percent rate. Of the states that border Nebraska, Kansas and South Dakota shared the lowest levels of unemployment at 3.9 percent, while Wyoming was the highest at 5.8 percent. Of the 257 metropolitan areas reported by the BLS in November, only Raleigh-Durham, North Carolina had a lower unemployment rate than Lincoln, Nebraska (1.9 percent versus 2.0 percent).

County of the Month

Nuckolls



Nelson--County Seat

License plate prefix number: 42

Size of county: 579 square miles, ranks 45th in the state

Population: 6,200 (estimated) in 1988, a change of -7.2 percent from 1980

Median age: 36.8 years in Nuckolls County, 29.7 years in Nebraska in 1980

Per capita personal income: $13,128 in 1987, ranks 67th in the state

Net taxable retail sales ($000): $28,966 in 1988, a change of 4.7 percent from 1987; $23,810 during January-October 1989, a change of -0.4 percent from the same period one year ago

Number of business and service establishments: 199 in 1987; 63.3 percent had less than five employees

Unemployment rate: 3.2 percent in Nuckolls County, 3.6 percent in Nebraska for 1988

Nonfarm employment (1988):

	State	**Nuckolls County**
Wage & Salary Workers	688,146	1,723
	(percent of total)	
Manufacturing	13.8%	12.0%
Construction and Mining	3.8	2.1
TCU	6.5	4.1
Retail Trade	18.5	21.7
Wholesale Trade	7.3	9.8
FIRE	7.0	4.7
Services	23.0	21.6
Government	20.1	24.0
Total	100.0%	100.0%

Agriculture:

Number of farms: 621 in 1987, 624 in 1982

Average farm size: 541 acres in 1987

Market value of farm products sold: $45.3 million in 1987 ($73,019 average per farm)

Sources: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, Nebraska Department of Labor, Nebraska Department of Revenue

Merlin W. Erickson

Business
in
Nebraska

PREPARED BY BUREAU OF BUSINESS RESEARCH
Association for University Business & Economic Research

Business in Nebraska is issued as a public service and mailed free of charge upon request to 200 CBA, University of Nebraska-Lincoln, Lincoln, NE 68588-0406. Copyright 1990 by Bureau of Business Research, University of Nebraska-Lincoln. ISSN 0007-683X.

February 1990, Volume 45 No. 545

University of Nebraska-Lincoln-- Martin Massengale, *Chancellor*
College of Business Administration--Gary Schwendiman, *Dean*

Bureau of Business Research
F. Charles Lamphear, *Director*
Merlin W. Erickson, *Research Associate*
Margo Young, *Communications Associate*
John S. Austin, *Statistical Coordinator*
Barbara Sumsion, *Composing Technician*
Lisa Darlington, *Secretary*
Dave DePruiter, *Information Systems Coordinator*

The University of Nebraska-Lincoln does not discriminate in its academic, admission, or employment programs and abides by all federal regulations pertaining to same.

Nonprofit Org.
U. S. Postage
PAID
Lincoln, Nebraska
Permit No. 46

CONGRESSIONAL INFO SERVIC270238
SRI BR
4520 EAST-WEST HWY
BETHESDA, MD 20814

U7860-1

Business
In
Nebraska

March 1990
Vol. 45 No. 546

Prepared by the Bureau of Business Research
200 College of Business Administration
University of Nebraska-Lincoln
Lincoln, NE 68588-0406
402/472-2334

Nebraska's Tax System: At A Crossroads

Bruce B. Johnson, UNL, Professor of Agricultural Economics*

**This article is condensed from a presentation at the State of the State Conference, Lincoln, Nebraska, January 23, 1990. Opinions expressed are those of the author.*

Introduction

The old adage (at least the tax part of the phrase) that "nothing is certain except death and taxes" has taken a new twist in Nebraska. There are few other policy issues in Nebraska's political arena today where the level of uncertainty about the outcome is as high.

For a number of reasons, we face a situation today that is approaching political gridlock and institutional meltdown. Citizen concern and discontent regarding state and local taxes and tax policy are running at a feverish pace. Moves and countermoves among the various interest groups and units of government have led to a continued unraveling of our tax system.

Is our tax system in a crisis state? I believe it is in this sense. I see Nebraska at a critical juncture--decisions facing the state in the coming months will bear heavily on the outcome. The outcome of our decisions could be a balanced, fair, and visionary tax system. Alternatively, the outcome could be a hodgepodge of political tax posturing that leaves Nebraska and its citizens limping into the 21st century.

I hope, as I'm sure we all do, that it is the former and not the latter outcome that prevails. But for this to happen, I believe we must approach tax issues and fiscal policy with a new mindset. Rather than reactive or crisis management, we need to assume a proactive style of decision making. Proactive decision making means seeing the longer run, not just the short run; it means understanding the total system, not just a specific component; it means considering broader societal interest, not just individual interest.

It is in this proactive context that I would like to discuss some of the pressing issues of our current tax system. We first will review Nebraska's tax structure and compare it with other states. Second, we will reflect on some fundamentals of sound tax policy. Finally, we will discuss some potential ways in which Nebraska could move toward a visionary tax system.

The Present Tax System

Nebraska's state tax structure comprises three primary broad based taxes: a general sales tax, a personal income tax, and a corporate income tax. The state's general sales tax of 4 percent on most retail items generated about $364 million in 1987. This figure equals about $245 per person, ranking Nebraska 38th of the 45 states that have sales taxes. Nebraska's per capita rate was just 73 percent of the average for the 45 states using the sales tax and lower than all of its neighboring states,

State Economic Scoreboard

Change from same month one year ago.
See Review and Outlook on page 9 for more details.

	State	Metro+	Nonmetro
Motor Vehicle Sales (November) Constant $	↓ -6.0%	↓ -2.6%	↓ -8.6%
Nonmotor Vehicle Sales (November) Constant $	↓ -1.4%	↓ -4.4%	↑ 1.7%
Building Activity (November) Constant $	↑ 19.9%	↑ 15.2%	↑ 26.1%
Employment (January)	↑ 3.1%	↑ 4.2%	↑ 1.9%
Unemployment Rate* (January)	↓ 3.1%	↓ 2.8%	↓ 3.5%

+Omaha and Lincoln. *Unemployment is this month's rate, not a percent change from year ago.

with the exception of Colorado. If this state would have been at the U.S. average ($328 per person), over $140 million in additional sales tax revenues would have been generated by the state sales tax.

The state personal income tax component generates a level of revenue comparable to that of the sales tax. In fiscal 1987 personal income tax revenues were more than $348 million, about $226 per person. Nebraska ranked 32nd on a per capita basis of 44 states that employ the personal income tax, below all of its neighboring states. (Wyoming and South Dakota have no sales tax.) Nebraska's per capita personal income tax rate was 66 percent of the average for the 44 states using the personal income tax in 1987. If Nebraska had been at the U.S. average of $344 per person, state personal income taxes in fiscal 1987 would have totaled $530 million, over $180 million more than was collected.

Another way to assess personal income taxes is to express such taxes as dollars per $1,000 of personal income. In fiscal 1987 Nebraska's rate was $16.39 per $1,000 of personal income, about 70 percent of the overall average and 35th of the 44 states using the personal income tax.

Nebraska's corporate income tax generated about $73 million in revenues in 1986. As a percent of all state tax collections, the corporate tax percentage share ranks Nebraska 33rd among the 46 states that employ the corporate income tax.

The state's low rank is due in part to the fact that its tax rate (or burden) on corporate income is only 50 percent of the national average, ranking Nebraska 43rd of the 46 states. This tax source is staged to fall even more in coming months as the first impacts of LB775 become evident. Department of Revenue researchers now speculate that corporate income tax receipts could fall 5 percent to 10 percent.

There are other tax sources for the state, but these three generate the bulk of revenues. Total state tax revenue on a per capita basis was $755 in 1987. This level was about 75 percent of the 50 state average. Nebraska ranked 44th on an overall basis. Of our neighboring states, only South Dakota was lower. In short, Nebraskans' tax burden at the state level is modest by almost every measure.

Although the state-level tax burden is comparatively light, the local tax burden in the form of property taxes in Nebraska is among the heaviest in the nation. Property tax collections on a per capita basis were $730 in 1988, generating more than $1.1 billion of revenue. The per capita rate of $636 ranked Nebraska 13th among the 50 states in 1987, a rate nearly 28 percent higher than the U.S. average. When calculated on a per $1,000 of personal income basis, property tax collections in 1987 were $46--only seven other states were higher. This rate was nearly 35 percent higher than the U.S. average.

The property tax burden converges on the property owner, regardless of income considerations. The resulting disparities can be even greater. For example, in Nebraska the average effective tax rates (taxes as a percent of $100 of market value) on single family homes with FHA-insured mortgages was 2.29 percent in 1985, compared to the national average of 1.21 percent. A 1988 Syracuse University study of Nebraska's tax system found that only in New York and New Jersey were effective property tax rates higher on single family homes.

Likewise, for holders of Nebraska farm real estate, taxes per $100 of market value in 1987 averaged $2.04, as compared to $.86 nationwide. In 1987, Nebraska claimed one of the highest tax rates on agricultural real estate. These high rates were before the Nebraska Supreme Court mandated a change in farmland assessment that raised tax obligations on this property class even higher.

Combining both state and local tax collections leads to a per capita average of $1,460 for fiscal year 1986, about 88 percent of the national average and 28th among the 50 states. The rate was $106 when expressed as dollars per $1,000 of personal income, placing Nebraska 34th among the states.

It is important to recognize at this juncture that tax structure can not be analyzed independently of the other side of the fiscal coin, i.e., expenditures. The obvious question is, "How does Nebraska compare in terms of state-local expenditures?"

As noted in Table 1, Nebraska's overall expenditure level by state and local units of government is in line with its tax collection performance. In fiscal year 1987, per capita expenditures in Nebraska averaged $2,479, 92 percent of the U.S. average. Expenditures by government placed Nebraska 30th among the states on a per capita basis. We are not big spenders.

One major item, elementary and secondary education, was essentially equal to the U.S. average of $644 per capita, putting Nebraska in 19th place. For some items, Nebraska's per capita expenditures outpaced most states. Direct highway expenditures of $284, for example, were 33 percent higher than the U.S. per capita average, ranking the state 12th overall. High per capita expenditures are expected in a state characterized by relatively large area and low population density.

To some extent, low population density also explains the higher per capita expenditures for health and hospitals and higher education. Institutions have high fixed costs. At the same time, per capita outlays for public welfare, law enforcement, and corrections were considerably below the U.S. average.

The overall expenditure picture does not indicate excessive spending and fiscal irresponsibility by state and local units of government. At issue is how Nebraska allocates the tax burden between different forms of taxation and between different layers of government.

Nebraska's current tax structure is unique. Nebraskans have chosen to follow a path of fiscal decentralization, with continued heavy reliance on local property taxes and relatively modest levels of taxation at the state level. To a considerable extent, the state and local mix reflects the limited role that state-collected tax revenues play in providing local services, principally public education.

According to recent findings of Nebraska's School Finance Review Commission, local sources in Nebraska account for 70 percent of the revenues for public elementary and secondary schools, while the state provides 24 percent and federal sources the remaining 6 percent. In contrast, the U.S. average shows local sources providing 44 percent, the state 50 percent, and the federal government 6 percent of education costs.

Few other states rank below Nebraska in terms of percentage of public school funding provided by state aid. Other states have continued to move toward more state-level support, but Nebraska has done

Table 1
State-Local Expenditure Patterns For Nebraska and The U.S.
Per Capita Levels for Selected Items
Fiscal Year 1987*

	Per Capita Nebraska	Average U.S.	% of U.S. Average	Nebraska Ranking
General Expenditures	$2,479	$2,695	92 %	30th
Elementary & Secondary Education	645	644	100	19th
Higher Education	311	247	126	12th
Direct Public Welfare	260	329	79	25th
Direct Health & Hospitals	265	234	113	12th
Direct Highway	284	214	133	12th
Direct Police	66	101	65	38th
Direct Corrections	38	68	56	40th
Direct Protective Inspection & Regulation	16	18	89	22nd

*Source: Advisory Commission on Intergovernmental Relations, *Significant Features of Fiscal Federalism*, 1989 Edition, Volume II (August 1989)

just the opposite. The state share of school expenses paid using state tax sources in Nebraska has decreased since the early 1980s. School support has become even more dependent on local property taxes.

It is little wonder that many of the major policy issues of our current tax crisis arise from the property tax component. Let me highlight briefly:

1. The status of agricultural land assessment is in flux. In response to Nebraska Supreme Court rulings in 1984 and 1987, the uniformity clause in the Nebraska Constitution still mandates uniform assessment across all classes of property. Actual market value of agricultural land is required. A market value base was enacted under LB361 in 1989. This statute, according to the Nebraska Department of Revenue, resulted in an average increase in valuation of 43 percent for agricultural land in 1989 and could add a 12 percent to 16 percent increase in 1990.

2. A proposed Constitutional amendment scheduled for the ballot in November would allow agricultural and horticultural land to constitute a distinct class of property for purposes of taxation, thereby permitting nonuniformity with other classes of property.

3. Personal property exemptions have been granted in federal district court by railroads and railcar line companies using the equal protection clause of the U.S. Constitution. This ruling resulted in an estimated $12 million loss to local governments in Nebraska.

4. The 1988 Nebraska Supreme Court decision granting pipeline companies exemptions from Nebraska's personal property tax may impact local governments severely. Personal property refunds to these companies from local units of government due to this court decision may exceed $4 million.

5. Subsequent to the Supreme Court's pipeline decision, there has been a proliferation of appeals for personal property exemptions from over 240 companies.

6. Enactment of stopgap measures in the November 1989 special legislative session to limit tax refunds and to redefine certain items as real property in order to isolate taxes from personal property exemptions temporarily has delayed the fiscal loss of some $70 million in personal property tax revenues.

7. A one year property tax relief package was funded through June 1990 from the state general fund surplus.

8. In the present legislative session, a proposed extension of the one year property tax relief bill and a major overhaul of the school finance system would lead to reduced dependency on property taxes.

The above list is incomplete, but I think the point is clear--our tax system is in a state of flux. If we are to proceed in any systematic manner of tax reform, we need to reflect on the basic fundamentals of sound tax policy.

Basic Principles of Sound Taxation

Any tax system evolves in response to a number of influences--economic, social, and political. No tax system has been constructed by a master architect according to optimum requirements for a good tax structure. Yet ideas or principles of sound taxation have had their influence.

Tweeten and Brinkman state that "a good tax system should be easy to administer, generate an adequate amount of revenue, and be fair to the taxpayers." Few would disagree. The trouble lies in implementation. We need more specifics.

In their classic book on public finance, Richard and Peggy Musgrave list several attributes of a good tax system:

1. The distribution of the tax burden should be equitable. Everyone should be made to pay his or her fair share.

2. Taxes should be chosen to minimize interference with economic decisions in otherwise efficient markets. Such interferences impose excess burdens that should be minimized.

3. Where tax policy is used to achieve other objectives, such as to grant investment incentives, changes should be made in a way that minimizes interference with the equity of the system.

4. The tax structure should facilitate the use of fiscal policy for stabilization and growth objectives.

5. The tax system should permit fair and nonarbitrary administration. It should be understandable to the taxpayer.

6. Administration and compliance costs should be as low as is compatible with the other objectives.

Certainly, there are situations where these objectives may conflict. Tradeoffs often are needed. Moreover, we could debate at length the merits of the various elements of a sound tax system without reaching a consensus. Nevertheless, these elements can serve as a useful framework for us to consider. The common ground of agreement may be far greater than we realize. If we were to proceed with these basic principles and our long-run vision for the State of Nebraska, I believe we may find a fertile environment for systematic and innovative tax reform.

Toward a More Visionary Tax System

For discussion purposes, permit me to sketch a few ideas of how we could proceed. I begin with a set of givens:

1. Even though many politicians do not have the fortitude to admit it, increased taxation in some form is inevitable in the years ahead. That is the case in Nebraska for a variety of reasons:

- Continued maintenance, upgrading, and development of our public infrastructure will be required. At the same time federal funding sources may diminish.
- Nebraska's natural resources will take public dollars to protect and nurture. Again, the state's role of responsibility and initiative likely will expand relative to that of the federal government.
- Excellence in public education and development of human capital through lifelong learning is the key to successful living in the 21st century. As a state, we need to invest heavily in this public good. As Justice Oliver Wendell Holmes once stated, "taxes are what we pay for a civilized society."

2. The citizen is not averse to paying taxes as long as he or she shares a common vision of societal objectives and a sense of equity in opportunity and tax fairness. Partiality creates dissension and divisiveness, while fairness creates community. It is my opinion that the voter is not totally preoccupied with tax avoidance.

3. Our present state and local tax structure retains a relatively high degree of localized autonomy and fiscal responsibility, while the expenditure needs and societal objectives increasingly transcend local tax boundaries and become statewide in focus. Omaha, Ord, and Oshkosh are not independent entities. Neither are Lancaster County and Lincoln County. We are increasingly interdependent, and our governmental functions are no exception. Therefore, fiscal responsibility, it seems to me, is evolving toward more statewide emphasis.

Assuming these three givens, one logical first step would be school financing reform. There is currently in legislative debate LB1059, a bill addressing many of the factors previously discussed. The bill was submitted under the signatures of 32 of the state's senators.

LB1059 is first and foremost an educational bill, even though tax implications abound in it. Its primary goal is to provide all Nebraska children a more equitable opportunity for an appropriate education, with consideration given to the vast geographical and financial disparities that exist in Nebraska. It would increase state financial support from the present 24 percent to about 45 percent. That increase would reduce aggregate property taxes an estimated 15 percent. The tax shift would be from local property taxes to some combination of increased state income or sales taxes.

Is such a tax shift reasonable? There are several reasons to suggest that it is. If one considers tax equity on the basis of benefits received, then attributing the lion's share of public education expenses to a tax on property is ill conceived. It reflects a system appropriate for an economy based on a yeoman type of agriculture--something this country has not had for more than a century.

Children of property owners and nonproperty owners alike are being educated. Unlike expenditures for roads, bridges, and law enforcement that directly benefit property owners, the benefits of public education are indirect at best. The criterion of equity on the basis of ability to pay is distorted by heavy dependence on property taxes for funding education. Large property wealth disparities exist among school districts--there is often no relation to ability to pay. These disparities often lead to distorted educational opportunities as well as tax inequities.

A tax shift from local property taxes to a state-level income or sales tax also implies some geographic shift in tax incidence. Some would argue there will be a shift in the tax burden from rural to urban areas. One can counter that point partially by considering that nonurban school districts across the state have been subsidizing urban areas for decades, as high percentages of nonurban high school graduates have migrated to those urban areas as educated and productive adults.

The school financing reform question ultimately involves an implied tax increase at the state level, something the electorate is never happy to see. Yet I believe that when the public understands the importance of this step to their young persons and the associated enhanced equity of taxation, they will support it.

Let's turn to another component of our tax structure--the corporate income tax. Nebraska currently has one of the lowest corporate income tax rates in the nation. Some would argue that these low rates are part of a sound policy to induce economic development and expansion in the state, but the economic literature does not provide decisive support of this policy.

Although there may be some logic to this argument, I believe we need to consider this dimension in a more holistic context. Corporations operating in Nebraska are also our neighbors, utilizing essentially the same public goods and services as anyone else. The question could be raised, "Why are they not obliged as good neighbors to meet their fair share of state and local tax responsibilities?"

In the special legislative session last fall some senators proposed a corporate tax increase, probably in response to the large number of business firms filing for personal property tax exemptions. The senators' patience with business entities seeking tax avoidance was obviously growing thin. But the general electorate also is concerned about earlier tax concessions associated with LB775 (the Employment and Investment Growth Act) and the perceived disparity of its effects on corporate tax liability when individual taxes were rising concurrently.

We are at a logical point to consider raising corporate income tax rates, at least to levels comparable to national averages, without imposing excessive burdens on corporate interests. Obviously, there would be some negative response to such an increase. In view of the long-run interest of the state, I think the visionary members of the corporate community would understand this step as part of their responsibility to Nebraska's future as well as to their own economic well-being. In turn, the individual tax payer also would perceive a greater sense of equity.

The third issue to consider is the assessment of agricultural land for property tax purposes. Under the uniformity clause in our state constitution, we presently must assess agricultural land on a market value basis. But on the ballot next fall will be a constitutional amendment to allow agricultural and horticultural land to be a distinct class of property for purposes of taxation. This amendment would allow farmland to return to a use-value assessment procedure.

Voters overwhelmingly passed a similar constitutional amendment in 1984, only to have it voided by the Nebraska Supreme Court. The outcome next fall is uncertain. Voter sentiment may be far different than that of 1984, when Nebraska was in the midst of a farm crisis. The vote could be seen as simply a tax shift issue, with farm and nonfarm groups pitted against one another.

In reality the farmland tax issue is a much broader one. Nebraska farmland taxes per $100 of value are some of the highest in the nation. The property tax burden on this state's production agriculture creates an economic disadvantage relative to farm production sectors in other states. Forty-six other states employ a use-value assessment scheme to tax agricultural land, reflecting the notion that earnings in current use are a more reasonable measure of ability to pay. It is ironic that Nebraska, ranking fourth in the nation in terms of cash receipts from farm marketings, now is imposing the higher market value concept instead of an income-derived value on agricultural land for tax purposes.

There are also legitimate questions to be raised about the administration of a market-derived assessment process to agricultural property that is dominated by markets with low rates of turnover and the sale of parcels or add-on units rather than whole farm units. A reliable and equitable procedure would dictate considerable administration costs--a violation of one of the principles of sound taxation. Thus, on the basis of administration as well as on the basis of being a tax burden on a key sector of our state's economy, the farmland assessment issue demands thoughtful deliberation by the electorate.

A fourth dimension of the current tax stew is the proposed one year extension of property tax relief and no less than four bills advocating spending lids for state and local units of governments. The electorate's widespread frustration over tax burdens, particularly property taxes, has forced these reactionary measures. Given the frustration index, a case can be made that these measures are needed. But this is political football.

Shifting some state general fund surpluses into a property tax relief package is a short-run measure. Moreover, when governmental spending lid provisions are attached, it can cripple rational public sector planning for years. I think we must conclude that by all measures this pending legislation is devoid of long-run, visionary policy for the state. We can ill afford many more of these political jump starts when a fundamental overhaul of our fiscal system is long overdue.

These are but a few of the specific tax issues facing Nebraskans in the coming months. Our tax structure is complex. Stress points are proliferating. I think we need to empathize with our administrative and legislative branches who face a monumental task of guiding the state toward rational tax policy while dealing with immediate needs on many fronts.

I conclude by suggesting a modest proposal for the fiscal policy process. Why not establish an ongoing fiscal congress to focus on tax and expenditure issues of state and local governments? The objective of this fiscal congress would be to monitor and assess our system in a comprehensive and systematic manner and to recommend appropriate policy measures and sequences of adjustment. A necessary part of this overall effort would be a vigorous, comprehensive statewide fiscal educational program. Representation would be broad based. It would include members of the executive and legislative branches of state government, officials and employees of various state and local units and agencies of government, representatives of the economic community, and sound representation from the general citizenry. The fiscal congress would need to identify the longer-run direction or vision of the state in terms of fiscal components and then design an appropriate system of revenue generation. Their challenge would be to do what Peter Drucker advocates in his book, *The New Realities*:

> . . . organize around agreement over ends, indeed, to mobilize the consensus on ends--This also may be the only way to undercut the paralyzing power of the small minorities.

From this consensus, based on ideals as well as reality, I believe we could see spirited debate spawning new and effective institutional configurations of fiscal policy.

We are at a tax crossroads. And it is time to seize our opportunities.

Rural Growth Outpaces Urban Growth

The rural growth rate outpaced the urban rate between 1986 and 1988, according to a 1989 U.S. Census Bureau report on rural and rural farm populations.

The U.S. rural population, which includes all nonurban residents, recorded a growth rate of 2.6 percent, exceeding the urban rate of 1.7 percent.

The higher rural growth rate runs counter to the trend for urban population growth rates to exceed rural rates that has existed in almost every decade of U.S. history. One exception to the trend occurred during the 1970s, when urban growth recorded only a 0.1 percent increase. The slight growth that did occur was due to a change in the definition of urban areas by the U.S. Census Bureau. Under the previous definition, urban population figures would have shown a decline of 0.2 percent.

Nationally, one-fourth of the population (about 65 million persons) lived in rural areas in 1988. These areas are defined as open country and areas with less than 2,500 persons. Large cities, their suburbs, and other places with more than 2,500 inhabitants are not included in the Census Bureau's definition of rural areas.

When 1990 census data are collected and analyzed, the 1988 growth may not be reflected, the Census Bureau said. During the 1990 census, urban area boundaries will be redefines, and many of the areas currently defined as rural will be reclassified as urban. Some of the 1988 growth, therefore, will be labelled as urban.

Patricia C. Dinslage

Nebraska Credit Unions

Andrew Pitcher
Bureau of Business Research, Graduate Assistant

Introduction

Credit unions traditionally have been cast as the homely cousin in the banking industry, not possessing the glamour of commercial banks or savings and loan associations (S&Ls). Recent changes in the competitive environment have allowed credit unions to adopt increasingly bank-like services. In order to survive in the big league, however, credit unions must adopt more of the financial management acumen of the banks and S&Ls and even must run the risk of losing some of the special benefits that have allowed credit unions to grow rapidly.

Credit Unions in Nebraska

Credit unions form a relatively minor segment of the credit market, but they have played an important role in the provision of credit. For the year ended December 1988, Nebraska had 118 credit unions. Forty-seven were state chartered, and 71 were federally chartered. Over 18 percent of Nebraska's population belongs to a credit union.

The history of credit unions in Nebraska closely follows that of credit unions in the rest of the country. Although the state's first cooperative credit law was passed in 1919, it was not until a wave of bank failures in 1921 that Nebraskans began to organize cooperative banks.

The credit law, however, precluded these cooperative organizations from replacing commercial banks. An act was passed in 1943 that allowed conversion of cooperative credit associations into credit unions, thereby establishing state-chartered credit unions in Nebraska.

The credit union movement has grown rapidly since that time. Figure 1 shows the growth of credit unions in Nebraska. Although the number of credit unions leveled in the '60s and decreased in the '80s, membership generally has continued to increase. The membership of Nebraska credit unions swelled over 40 percent between 1978 and 1988. The United States credit union membership increased about the same percentage over this ten year time period.

Why are Credit Unions Special?

Credit unions developed as a response to the demand for consumer credit. The consumer credit market traditionally has been undersupplied due to a number of factors. These factors include the relatively high cost of originating and servicing a consumer-oriented loan, high fixed costs, and poor information flows.

Credit unions are member-owned or mutual institutions. The cooperative nature of credit unions is one factor that allows credit unions to strike a competitive advantage in the market for consumer credit. Because credit unions generally do not pay directors and officers, operating expenses are relatively low.

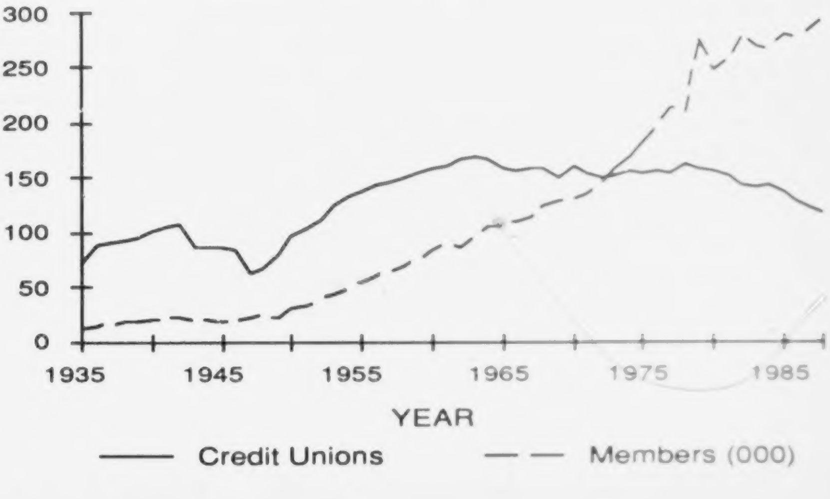
Where there is an occupational common bond, members generally know each other, and the costs of gathering credit information are low. In addition, where there is a sponsor relationship, the sponsor may be able to supply accurate income data for members, reducing the costs of verifying income data. The sponsor also may support the credit union with capital and labor subsidies by providing such benefits as paid time off from regular employment for volunteer officials, office space and furnishings, and payroll deductions. Payroll deductions are particularly important; approximately 90 percent of credit unions with occupational common bonds provide this service. Furthermore, the sponsor relationship provides prompt notice of employee termination to the credit union and may prevent the credit union from making a bad loan to an employee who has just quit his or her job. Occupational and associational organizations together comprise 96 percent of all credit unions.

In addition to employer subsidies, credit unions may receive subsidies from other sources. For example, state credit union leagues and the CUNA Mutual Insurance Society receive government subsidies such as exemptions from federal income taxes. In addition, subsidies furnished by sponsors are deductible business expenses for the sponsor. Credit unions serving government employees, a major part of the industry, sometimes are granted free space and payroll deductions.

Market Share

Nebraska credit unions held over $838 million in savings effective December

Figure 1
Nebraska Credit Unions
(1935-1988)



31,1988. This holding represents a relatively minor share (3.5 percent) of the Nebraska savings market--Nebraska commercial banks had $15.1 billion (63.9 percent) in deposits, while Nebraska savings and loan associations held $7.71 billion (32.6 percent) in deposits at the same time.

At the national level, U.S. credit unions only control 6 percent of consumer savings. Credit union market share is better in certain sectors of the loan market. For example, U.S. credit unions controlled 12.8 percent of the installment credit market and 14.7 percent of the auto loan market in 1988.

Figure 2 shows the percentage of U.S. savings held by various types of savings institutions as of December 31, 1988.

Although credit unions do not enjoy the same market share as commercial banks, they have had comparable growth rates. Figure 3 shows the five year moving average growth rates for U.S. credit unions and the average for all other depository institutions from 1975 to 1988. Credit unions generally have enjoyed a superior growth rate relative to other depository institutions over this period. Credit unions grew 14.5 percent on average over the period. That growth compares favorably to commercial bank rate of 11.7 percent over the same period.

Analysis of the asset size distribution of credit unions suggests credit unions tend to favor a relatively small asset base. As of December 1988, nearly 21 percent of the number of credit unions had assets of less than $500,000. The second largest category is between $2 million and $5 million in assets, with 19.28 percent of the nations credit unions falling into the category. Only 2 percent had assets over $100 million. Loan delinquencies and losses for small credit unions tend to exceed the industry averages, and their loss reserves do not cover delinquencies.

Many of the factors that help to make credit unions competitive also can work against them. The geographical and associational relationships may restrict loan diversification opportunities.

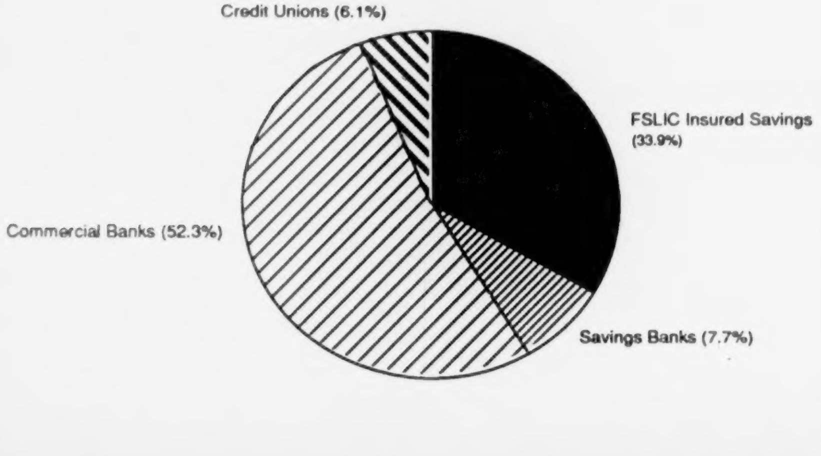
Regulation

Government regulation of credit unions is similar to government regulation of banks, mutual savings banks, and savings and loan associations. In the dual chartering system, state-chartered credit unions are chartered, examined, and supervised by the states. Federally-chartered credit unions are chartered, examined, and supervised by the National Credit Union Administration, a federal government agency.

The Depository Institutions Deregulation and Monetary Control Act of 1980 signalled a shift toward reliance on competitive market forces to stimulate competition among financial institutions. The consequences of these changes are only now beginning to be felt. For some institutions previously protected from the rigors of competition, the change has been difficult. Other institutions have not developed the necessary commercial skills and have moved too quickly into areas where they possess no competitive advantage.

As a result of deregulation, many institutions have had the benefit of insurance, but have been not paying the cost associated with the riskiness of their loan portfolio. Deregulation on credit unions has led to an expansion of credit union activities into areas that traditionally have been the province of other depository institutions.

Figure 2
U.S. Savings Institutions
Over-the-Counter Savings (1988)



Share Insurance Funds

Credit unions differ from most other financial institutions--their deposits are classified as shares and are part of the institution's equity, rather than part of its liabilities. The proportion of available cash to members' deposits, like other financial institutions, is necessarily kept low.

To guard against the risk of runs, credit unions, like banks or other financial institutions, participate in share (deposit) insurance funds. The largest insurer of credit union shares is the National Credit Union Share Insurance Fund, insuring 96 percent of all credit union shares. The remaining 4 percent are insured by 11 state credit union funds or guaranty corporations. Only six credit unions operated without some form of share insurance coverage during 1988. Nebraska state law requires participation in the insurance program of the National Credit Unions Administration.

Table 1 shows the ratio of the deposit insurance fund to insured deposits for banks, S&Ls, and credit unions.

In 1985 credit unions recapitalized the National Credit Unions Share Insurance Fund by adding 1 percent of their insured shares to the fund. Since then, the NCUSIF has been the healthiest of the three federal deposit insurance funds.

The Financial Stability of Credit Unions

The nation's Credit Union Share Insurance Fund appears healthy. A study by Veribanc, a credit analysis firm in Woburn, Massachusetts, found the nation's credit unions to be in a safer financial position than the savings and loan institutions.

There are indications, however, that deregulation has forced credit unions to

Table 1
Deposit Insurance Fund/Insured Deposits
(percentage)

Date	Banks	S&Ls	Credit Unions
6/89	0.79	(negative)	1.25
12/88	0.80	(negative)	1.24
12/87	1.10	(negative)	1.23
12/86	1.12	(negative)	1.24
12/85	1.19	0.45	1.28
12/84	1.19	0.62	0.31
12/79	1.12	0.29	0.32

expand their mortgage lending activities to compete with S&Ls and banks. As credit unions turn to new lending avenues in an attempt to keep members, they are assuming a greater risk of portfolio losses.

For example, credit unions are holding a greater proportion of 30 year fixed rate mortgages. According to the National Credit Union Administration, the altered loan portfolio of credit unions places these institutions at risk if interest rates rise. If interest rates were to increase, the net interest margin of some credit unions would be squeezed. The institutions would have insufficient reserves to cushion the impact of their losses.

It is estimated that a three percentage point rise in long-term interest rates could cause some of the credit unions' fixed rate investments and loans to lose nearly 25 percent of their value. The losses could drive more than 150 of these institutions into technical insolvency. Although federally insured credit unions have adequate insurance funds, 12 percent of credit unions do not have federal insurance and are insured by state or private cooperative funds with varying degrees of safety.

Although for the most part credit unions generally have a favorable management record, as they engage in increasingly bank-like activities there will be a need for management accountability with control systems to protect the interests of stockholders (depositors) and creditors.

A review by the National Credit Union Administration of 575 of the 1,269 credit unions that failed in the 1981-1985 period finds that the most common cause of credit union failure was mismanagement. The other major cause of failure was weak internal operations, such as sloppy record keeping or failure to control expenses. Poor lending procedures or inadequate lending polices had a major impact in 63 percent of the failures examined.

The remaining failures were attributed to various other factors: apathetic board of directors (56 percent), runaway expenses (46 percent), shabby record keeping (41 percent), weak or nonexistent lending policy (31 percent), employee cuts by sponsoring employers (26 percent), declining membership (21 percent), sponsor failure (19 percent), and negative rate spread (19 percent).

Insufficient liquidity was regarded as critical in only 4 percent of the cases, and as important in 9 percent of the cases. Excess liquidity also may be a concern. Although too much liquidity is better than not enough, excess liquidity may tempt credit unions to put too much money into high yield risky investments.

Future Prospects

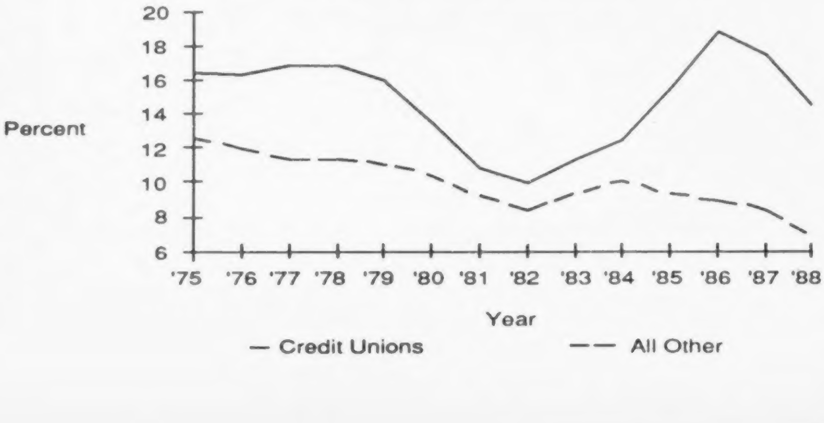
A possible future threat to credit unions is the much discussed taxation of credit union income. Currently, no credit union may be taxed on its income or financial assets by any level of government. Real property, however, is fully taxable. Many of the larger credit unions, however, have come to resemble thrift institutions--they offer services such as first and second mortgages, direct deposit, automatic teller access, preauthorized payments, credit cards, safe deposit boxes, and discount brokerage services. Of the 57.5 million credit union members in the United States, 49 percent now belong to full service credit unions.

As the common bond definition has grown, credit unions have moved into the traditional customer base of savings institutions and commercial banks. For example, the National Credit Union Administration recently granted a federal charter to the American Association of Retired Persons. The AARP has a membership in excess of 28 million persons and is open to anyone age 50 or older willing to pay $5 for annual dues.

Credit unions contend that the original reason for their special tax treatment--that they operate without profit and solely for the benefit of their members--justifies their current status. As their competitive position improves, however, there have been calls from the Congressional Budget Office to tax credit unions like other thrift institutions.

Future prospects for the industry will be determined largely by the response of the industry to competition in the rapidly changing environment of the financial sector. A more competitive environment carries increased risk. Increasing competitive pressure from technological advances in commercial banking may strain credit unions' customer base. The industry will have to move from its Mom and Pop image toward a more professional visage. The challenge for the NCUA will be to motivate member credit unions to adopt adequate control mechanisms to assure prudent financial management.

Figure 3
U.S. Savings Institutions
Five Year Moving Average Growth Rates



Review and Outlook

John S. Austin, Bureau of Business Research, Research Associate

The interdependence of the world economies is demonstrated when the lead story on the *Today* program concerns a major downturn in the Japanese stock market. Fortunately, our own markets have reached a level of international sophistication and did not overreact to what is essentially a domestic Japanese problem. It is refreshing that the American focus is now a broader world view than might have been true only a few years ago.

Some of the most dramatic news was contained in both the Consumer and Producer Price Index (CPI and PPI) reports. The PPI for finished goods in January advanced 1.8 percent. The bulk of this price acceleration was through rapid increases in energy prices due principally to a shortage of fuel oil on the east coast. The PPI for energy advanced 13.6 percent in a single month. Wholesale energy prices already have fallen from their shortage level. The PPI for food increased 2.1 percent in January, led by a whopping 58 percent increase in vegetable prices due to the Florida freeze. Nonfood, nonenergy producer prices advanced 0.1 percent in January, following a December increase of 0.5 percent.

The CPI advanced 1.1 percent in January, the biggest increase in seven years. The major elements affecting that advance were food and energy prices. The nonfood, nonenergy CPI rose 0.6 percent. These major increases in the price indexes should be temporary. There is some speculation that the PPI may decrease in the February report.

As previously indicated, one of the few sources of hope for breaking through the doldrums of 1990 is housing. January housing start numbers showed a dramatic increase, leaping to 1.625 million units at annual rates from a depressed December figure of 1.254 million units. We should not put too much credence into these numbers because the January advance reflected more of a recovery from poor weather conditions in December than any fundamental change in the housing area. January housing start data are always subject to large variation. The seasonal factors for this month are so low that any moderate increase in actual numbers will

Table I
National Indicators

	Annual		Quarterly (SAAR)			
	1988	1989	1989:I	1989:II	1989:III	1989:IV
Real GNP (percent change)	4.4	3.0	3.7	2.5	3.0	0.9
Real Consumption (percent change)	3.4	2.7	2.0	1.9	5.6	0.4
Housing Starts (millions)	1.5	1.4	1.5	1.4	1.3	1.3
Auto Sales (millions)	10.6	9.9	9.8	10.3	10.8	8.7
Interest Rate (90 day T-bill)	6.7	8.1	8.5	8.4	7.8	7.6
Unemployment Rate (percentage)	5.5	5.3	5.2	5.3	5.3	5.3
Industrial Production Index (1977=100)	137.2	141.8	140.7	141.8	142.2	142.3
Money Supply, M2 (percent change)	5.1	3.7	1.9	1.2	7.1	7.6

NOTE: SAAR—Seasonally Adjusted at Annual Rates. Source: Bureau of Economic Analysis

Table II
Employment in Nebraska

	Revised December 1989	Preliminary January 1990	January % Change vs. Year Ago
Place of Work			
Nonfarm	717,016	705,065	2.7
Manufacturing	96,093	95,636	2.0
Durables	46,567	46,603	0.9
Nondurables	49,526	49,033	3.1
Mining	1,313	1,238	-2.1
Construction	22,678	22,481	4.7
TCU*	46,748	46,257	1.8
Trade	188,324	184,460	2.7
Wholesale	54,095	53,695	4.9
Retail	134,229	130,765	1.8
FIRE**	48,628	48,393	2.8
Services	169,032	165,230	2.1
Government	144,200	141,370	3.6
Place of Residence			
Civilian Labor Force	814,338	823,074	2.62
Unemployment Rate	2.6%	3.1%	

*Transportation, Communication, and Utilities
**Finance, Insurance, and Real Estate

Source: Nebraska Department of Labor

Table III
Price Indices

	January 1990	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U* (1982-84 = 100)			
All Items	127.4	5.2	5.2
Commodities	119.9	5.3	5.3
Services	135.4	5.0	5.0
Producer Price Index (1982 = 100)			
Finished Goods	117.5	5.9	5.9
Intermediate Materials	113.4	2.6	2.6
Crude Materials	106.7	5.6	5.6
Ag Prices Received (1977 = 100)			
Nebraska	160	-0.6	-0.6
Crops	127	-10.6	-10.6
Livestock	181	4.0	4.0
United States	153	2.7	2.7
Crops	135	-3.6	-3.6
Livestock	170	7.6	7.6

U* = All urban consumers
Source: U.S. Bureau of Labor Statistics

show in dramatic changes in the seasonally adjusted numbers. At the first of the year, three or more months of housing data may be needed to spot a trend.

Further muddying recent economic news is a downturn in industrial production. The Industrial Production Index fell to 140.9 in January, a decrease of 1.2 percent from December. The fall in the index was blamed largely on the cuts in the auto industry. The index now has returned to its own March 1989 levels. I suspect we are in for a prolonged period of relative flatness in industrial production. Such a flatness characterizes the index when the economy has expanded for a long period.

The drop in industrial production has a peculiar benefit to it--the capacity utilization rate is now below 82 percent. That means that inflationary pressures, at least in the industrial goods areas, are reduced.

Nebraska Outlook

The outlook for the Nebraska economy is relatively slow growth in Gross State Product (GSP) of 1.2 percent this year. Nonfarm Nebraska GSP tends to track Gross National Product (GNP). Variations in total Nebraska GSP, however, tend to be due to variations in agricultural income. Agricultural income, as we use the term, is a net concept defined as the difference between gross receipts and gross outlays. Retarding the growth is a mild downturn in the agricultural sector. Nonfarm GSP is expected to grow 1.7 percent, matching our GNP forecast for the year. It is interesting to note that the 1.7 percent growth rate for GNP contrasts with a 1 percent growth rate per year for the nation's population. The population growth rate for Nebraska, however, is virtually stagnant. Thus, a 1.7 percent nonfarm GSP growth rate for Nebraska represents a solid advance in per capita terms compared to the national figures.

With the prospect of a lackluster economic performance for 1990 and with the further prospect of a low rate of economic growth for the remaining years of the 1990 decade, Nebraska's personal income is expected to show only modest increases. Historically, Nebraska's per capita personal income has stood at approximately 92 percent of the U.S. per capita income. Any variation in the ratio of Nebraska's per capita income to the U.S. figure tends to be due to changes in Nebraska's agricul-

Table IV
City Business Indicators
November 1989 Percent Change from Year Ago

The State and Its Trading Centers	Employment (1)	Building Activity (2)
NEBRASKA	0.7	21.4
Alliance	-3.3	-66.6
Beatrice	-1.3	56.2
Bellevue	0.0	49.2
Blair	0.0	-11.6
Broken Bow	-2.4	-94.7
Chadron	-2.7	19.4
Columbus	-0.5	193.8
Fairbury	-1.7	5.3
Falls City	-2.3	41.3
Fremont	-1.3	47.0
Grand Island	-0.5	-24.2
Hastings	-0.9	-10.5
Holdrege	-1.8	627.2
Kearney	-0.3	64.4
Lexington	-1.2	147.3
Lincoln	0.5	31.3
McCook	-0.5	104.5
Nebraska City	-1.5	235.4
Norfolk	-0.8	52.7
North Platte	-1.8	23.6
Ogallala	-1.5	-31.2
Omaha	0.0	4.5
Scottsbluff/Gering	-1.8	-28.8
Seward	-1.4	32.2
Sidney	-1.4	-60.4
South Sioux City	-0.8	-55.6
York	-1.6	1.2

(1)As a proxy for city employment, total employment (labor force basis) for the county in which a city is located is used

(2)Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes

Sources: Nebraska Department of Labor and reports from private and public agencies

Figure I
City Business Index
November 1989 Percent Change from Year Ago

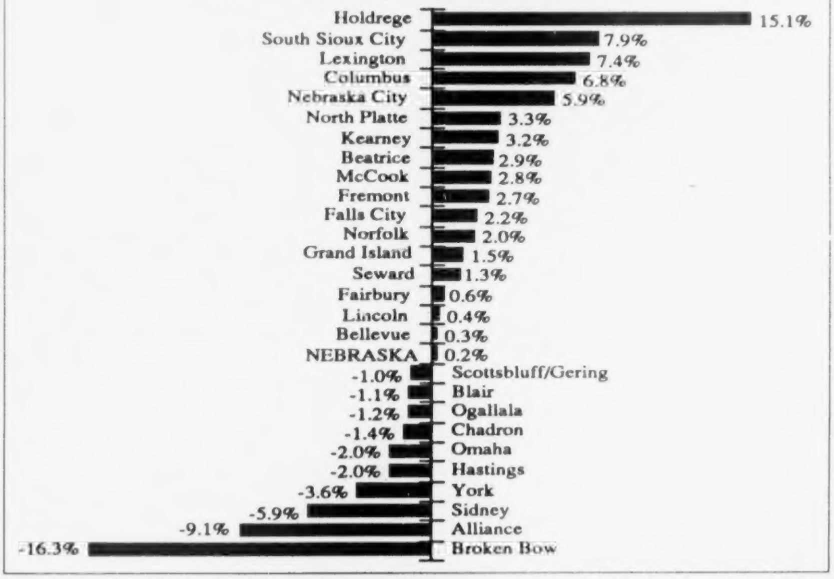
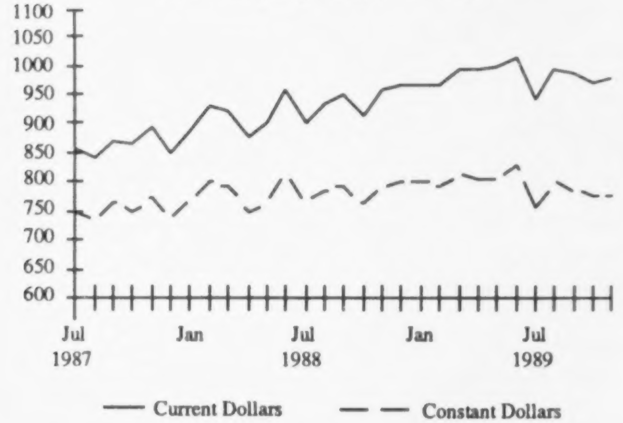


Table V
Net Taxable Retail Sales of Nebraska Regions and Cities

Region Number and City (1)	City Sales (2) November 1989 (000s)	City Sales (2) % Change vs. Year Ago	Region Sales (2) November 1989 (000s)	Region Sales (2) % Change vs. Year Ago	YTD % Change vs. Year Ago
NEBRASKA	$836,833	3.2	$946,830	2.6	6.7
1 Omaha	274,744	-1.0	339,168	-0.4	7.7
Bellevue	12,768	0.3	*	*	*
Blair	4,280	3.1	*	*	*
2 Lincoln	115,874	1.6	131,572	1.8	4.3
3 South Sioux City	5,656	32.8	7,427	27.0	11.4
4 Nebraska City	3,918	5.9	17,158	11.3	2.7
6 Fremont	15,601	7.6	28,203	3.4	5.3
West Point	2,827	14.5	*	*	*
7 Falls City	2,156	7.8	8,499	0.6	-0.6
8 Seward	4,292	5.7	14,624	5.4	2.5
9 York	6,617	-2.6	14,502	-4.3	5.3
10 Columbus	15,130	8.4	26,331	4.7	4.8
11 Norfolk	20,786	4.9	33,887	0.9	5.7
Wayne	2,588	6.5	*	*	*
12 Grand Island	35,684	11.4	48,127	9.4	8.7
13 Hastings	15,006	1.6	23,547	0.5	6.5
14 Beatrice	8,180	7.3	17,061	2.7	1.0
Fairbury	2,800	6.9	*	*	*
15 Kearney	18,974	6.3	25,641	3.4	8.6
16 Lexington	5,804	12.7	14,921	4.2	5.9
17 Holdrege	4,817	19.0	8,115	2.7	6.4
18 North Platte	15,829	11.4	19,746	10.4	6.2
19 Ogallala	5,173	7.1	10,547	3.0	10.5
20 McCook	7,793	3.3	11,079	3.3	3.7
21 Sidney	3,661	2.2	7,372	-1.5	0.0
Kimball	1,579	-1.2	*	*	*
22 Scottsbluff/Gering	18,061	7.6	24,264	3.5	8.4
23 Alliance	4,995	-1.3	13,324	-2.0	1.3
Chadron	2,600	1.8	*	*	*
24 O'Neill	3,955	0.6	13,731	5.2	11.2
Valentine	2,497	2.7	*	*	*
25 Hartington	1,421	12.9	7,716	7.6	2.0
26 Broken Bow	3,410	1.8	11,436	0.5	5.1

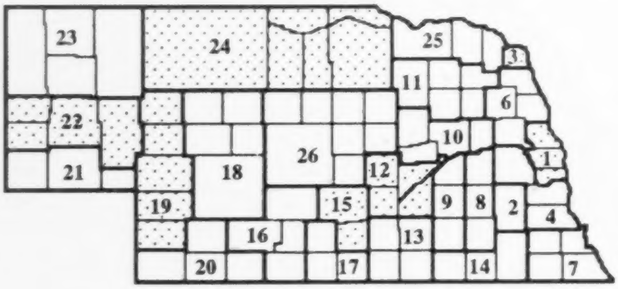
(1) See region map
(2) Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales
* Within an already designated region
Compiled from data provided by the Nebraska Department of Revenue

Figure II
Nebraska Net Taxable Retail Sales
(Seasonally Adjusted, $ Millions)



(1) The Consumer Price Index (1982-84 = 100) is used to deflate current dollars into constant dollars

Figure III
Region Sales Pattern
YTD as Percent Change from Year Ago



Shaded areas are those with sales gains above the state average. See Table V for corresponding regions and cities

tural income. Thus, in the good farm income years of the early 1970s, Nebraska's per capita personal income momentarily exceeded the U.S. levels.

Offsetting Nebraska's below average per capita personal income is Nebraska's below average cost of living. Based on data from the American Chamber of Commerce Research Association for five Nebraska cities, the state's cost of living appears to hold at about 90 percent of the U.S. level. The data suggest there is parity between Nebraska and U.S. real personal income per capita when purchasing power is considered.

If Nebraska is to match national per capita personal income figures, one logical point of attack is current wage levels. At issue is whether Nebraskans are underpaid for what they do or whether they tend to be employed in low wage jobs. Average hourly earnings in manufacturing in Nebraska are below the comparable U.S. average as well as below the comparable average of several of our neighboring states.

In contrast to the state average, Nebraska's two metropolitan areas have average hourly earnings in manufacturing close to the national average.

Tracking the manufacturing sector, we find that Nebraskans tend to be relatively well paid in the electrical machinery area, meat production area, and grain mill products area. Although these sectors show average hourly earnings slightly ahead of the U.S. averages, they are offset by lower average hourly earnings in many other sectors.

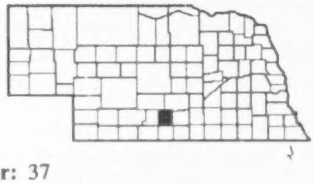
The more dramatic differences in wages appear in the services sector. Here we find Nebraskans are much below U.S. levels. Furthermore, the degree to which we receive low wages tends to hold throughout the entire spectrum of services. Once again, the issue is whether we are overrepresented in low paid service jobs or whether we are paid relatively low wages. In the business service area, Nebraska tends to be somewhat concentrated in low wage business service jobs such as telemarketing. We are underrepresented in other high paying jobs such as legal services, architectural services, and accounting services.

Certainly, more research needs to be done to identify whether Nebraskans are underpaid or whether Nebraskans are being hired in low wage positions.

County of the Month

Phelps

Holdrege--County Seat



License plate prefix number: 37

Size of county: 545 square miles, ranks 72nd in the state

Population: 9,800 (estimated) in 1988, a change of +0.7percent from 1980

Median age: 33.9 years in Phelps County, 29.7 years in Nebraska in 1980

Per capita personal income: $16,516 in 1987, ranks 11th in the state

Net taxable retail sales ($000): $62,811 in 1988, a change of +11.0 percent from 1987; $61,224 during January-November 1989, a change of +8.3 percent from the same period one year ago

Number of business and service establishments: 317 in 1987; 59.0 percent had less than five employees

Unemployment rate: 2.1 percent in Phelps County, 3.6 percent in Nebraska for 1988

Nonfarm employment (1988):

	State	Phelps County
Wage & salary workers	688,146	3,897
	(percent of total)	
Manufacturing	13.8%	20.6%
Construction and Mining	3.8	3.0
TCU	6.5	8.1
Retail Trade	18.5	18.0
Wholesale Trade	7.3	7.5
FIRE	7.0	4.4
Services	23.0	18.8
Government	20.1	19.6
Total	100.0%	100.0%

Agriculture:

Number of farms: 616 in 1987, 588 in 1982

Average farm size: 603 acres in 1987

Market value of farm products sold: $191.9 million in 1987 ($311,507 average per farm)

Sources: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, Nebraska Department of Labor, Nebraska Department of Revenue

Merlin W. Erickson

Business in Nebraska

PREPARED BY BUREAU OF BUSINESS RESEARCH
Association for University Business & Economic Research

Business in Nebraska is issued as a public service and mailed free of charge upon request to 200 CBA, University of Nebraska-Lincoln, Lincoln, NE 68588-0406. Copyright 1990 by Bureau of Business Research, University of Nebraska-Lincoln. ISSN 0007-683X.

March 1990, Volume 45 No. 546

University of Nebraska-Lincoln-- Martin Massengale, *Chancellor*
College of Business Administration--Gary Schwendiman, *Dean*

Bureau of Business Research
F. Charles Lamphear, *Director*
Merlin W. Erickson, *Research Associate*
Margo Young, *Communications Associate*
John S. Austin, *Research Associate*
Barbara Sumsion, *Composing Technician*
Lisa Darlington, *Secretary*
Carol Boyd, *Secretary*
Dave DeFruiter, *Information Systems Coordinator*

The University of Nebraska-Lincoln does not discriminate in its academic, admission, or employment programs and abides by all federal regulations pertaining to same.

Nonprofit Org.
U. S. Postage
PAID
Lincoln, Nebraska
Permit No. 46

CONGRESSIONAL INFO SERVIC270238
* SRI BR
* 4520 EAST-WEST HWY
* BETHESDA, MD 20814

c 7860-1

Business In Nebraska

April 1990
Vol. 45 No. 547

Prepared by the Bureau of Business Research
200 College of Business Administration
University of Nebraska-Lincoln
Lincoln, NE 68588-0406
402/472-2334

Evaluating Nebraska Banks

Charles E. Jordan and James R. Henderson, Assistant Professors
University of Southern Mississippi School of Professional Accountancy

Introduction

At no time since the Great Depression has the banking industry experienced the problems it faces today. The number of banks failing nationwide in 1988 reached a post-Depression high of 200. The number of bank closings in each of the last seven years has set new post-Depression highs. The number of bank failures in each of the last 15 years is shown in Table 1.

Table 1
Number of Bank Failures Per Year

Year	Bank Failures
1974	4
1975	13
1976	16
1977	6
1978	7
1979	10
1980	10
1981	10
1982	42
1983	48
1984	79
1985	120
1986	138
1987	184
1988	200

The banking industry posted a record profit of $25.3 billion in 1988 with the highest return on assets (.84 percent) since 1973. Ironically, the industry recorded a record number of failures during the same year. How can this be? Many banks, primarily larger ones, are doing well, while many banks, primarily smaller to medium size ones, are experiencing difficulties.

The purpose of this article is twofold: to present reasons for the recent proliferation of bank failures and to present a way to identify problem banks in Nebraska.

Bank Failures—Why So Many?

Numerous reasons are given for the recent increase in bank failures. For example, the deregulation of the banking industry in the early 1980s greatly enhanced competition within the industry. To maintain profit margins in the face of increased competition, many bankers sacrificed quality and made loans that ordinarily would not have been made. Loans often were made outside the bankers' areas of expertise, and numerous loan portfolios were allowed to become heavily concentrated. In attempts to remain competitive, many bankers used poor judgment and overexposed their banks to economic downturns.

Another factor contributing to bank failures is the prevailing restriction against branch banking. Branching limitations inhibit diversification of risk and may promote concentrations of credit. If more branch banking had been allowed in recent years, perhaps many bank failures could have been avoided—healthy

State Economic Scoreboard

Change from same month one year ago.
See Review and Outlook on page 8 for more details.

	State	Metro+	Nonmetro
Motor Vehicle Sales (December) Constant $	⇩ -16.6%	⇩ -14.0%	⇩ -18.6%
Nonmotor Vehicle Sales (December) Constant $	⇧ 0.1%	⇧ 1.1%	⇩ -1.0%
Building Activity (December) Constant $	⇧ 15.3%	⇧ 8.6%	⇧ 24.4%
Employment (February)	⇧ 4.3%	⇧ 3.6%	⇧ 5.1%
Unemployment Rate* (February)	⇩ 2.8%	⇩ 2.5%	⇩ 3.2%

+Omaha and Lincoln. *Unemployment is this month's rate, not a percent change from year ago.

branches would have absorbed the losses of unhealthy branches.

The reason most often given for the increased number of bank failures is the depressed economies of the oil and agricultural states in the last several years. For example, Nebraska suffered 26 bank failures from 1985-1988.

Fortunately, the economic climate in the region recently has begun to improve. With the improving economic environment, one might assume that bank failures are a thing of the past.

A 1988 study by the Office of the Comptroller of the Currency (OCC), however, indicates that the economic climate is not the primary cause of bank failure. The OCC study of 162 national bank failures since 1979 concluded that oversight and management deficiencies were the primary factors that caused bank failures. Poor policies and planning, especially concerning loans, were major problems in 89 percent of the banks that failed.

Based on this extensive OCC study, it appears that increased competition, restrictions against branch banking, and poor economic conditions are not the direct causes of bank failure. Poor management is the primary cause. These other factors combine to bring the management deficiencies to light sooner. Thus, as long as poor managerial practices exist, banks will continue to fail.

Depositors Beware!

As Knapp notes in a May 1985 *Journal of Accountancy* article, the proliferation of bank failures presents a possible problem to corporate depositors. Because deposits are guaranteed by the FDIC up to $100,000 only, large corporate depositors face a real potential for loss if total deposits in a failed bank exceed this limit. The potential for loss also exists for noncorporate depositors. Although the average individual customer's deposits fall below the $100,000 guarantee, it is not uncommon for affluent customers to have multiple accounts (e.g., checking, passbook savings, certificates of deposit, etc.) exceeding the $100,000 limit.

To avoid the potential for loss, depositors should maintain large accounts in banks run by sound management, which best can be determined by looking at the financial health of a bank.

The Z Index for Possible Bank Failures

To construct the Z index, data from 25 Nebraska banks that failed during the period 1985-1988 were combined with comparable data from nonfailed Nebraska banks for the same period. (Twenty-six banks failed during this period, but data were not available for one bank.)

Each failed bank was matched with a nonfailed Nebraska bank of approximately equal asset size. A match based on size made it possible to isolate differences in operating performance, rather than size.

The differences between the failed and nonfailed banks were determined by examining 30 financial ratios for the year-end prior to the year of failure. Ratios were obtained from call report information provided by Sheshunoff and Company.

The ratios provide measures of loan quality and loan concentration, capital adequacy, earnings ability and operating efficiency, liquidity, and bank growth. The ratios (all ratios are percentages—not decimals) that differed most significantly between the failed and nonfailed banks were:

- *Return on Assets (ROA)*—Income (or loss) before extraordinary items to average total assets. Measures the recent earnings ability of bank management in terms of a return on assets invested.
- *Primary Capital to Assets (PRIMCAP)*—Primary capital, consisting mainly of equity capital plus loan loss reserves, to average total assets. Measures the past earnings capability of management and indicates the cushion available to absorb future losses.
- *Overhead to Assets (OVERHEAD)*—Total of salaries and benefits, occupancy expense, and other operating expense to average earning assets. Measures management's efficiency with respect to overhead. A low percentage is favorable, while a high percentage is unfavorable.
- *Nonperforming Loans to Gross Loans (NONPERF)*—Total year-end loans and leases at least 90 days past due plus loans placed in a nonaccrual status to gross year-end loans and leases. Measures quality of bank's loan portfolio.
- *Loans to Assets (LOANS)*—Gross year-end loans to total year-end assets. Measures bank management's willingness to accept risks. A relatively high percentage indicates that management has accepted greater risks by investing a larger portion of assets in loans.

Table 2 shows the average amounts for each ratio for the failed and nonfailed Nebraska banks included in the sample. The relationships between the failed and nonfailed bank ratios are as expected and are indicative of the unhealthy status of the failed banks prior to their closure. These means are useful, as they provide benchmarks against which all Nebraska banks can be compared. Even more useful than the means is the model developed for identifying problem banks.

Table 2
Mean Ratios for
Failed and Nonfailed Banks

Ratio	Failed Banks	Nonfailed Banks
ROA	-1.95%	1.03%
PRIMCAP	7.83%	13.74%
OVERHEAD	4.30%	3.28%
NONPERF	10.21%	1.80%
LOANS	63.64%	43.94%

Multiple discriminant analysis (MDA) was used to develop the Z index to differentiate between failed and nonfailed banks. MDA involves deriving a linear combination of the independent variables (the five ratios) that best discriminates between the two groups. The resulting discriminant function or Z index is shown below:

$$Z = 1.25656 + .06351\ (\text{ROA}) + .01983\ (\text{PRIMCAP}) - .07280\ (\text{OVERHEAD}) - .00960\ (\text{NONPERF}) - .01130\ (\text{LOANS})$$

The Z index for a particular bank is compared to a cutting Z score to determine the bank's predicted classification. The cutting Z score is .5. A bank with a calculated Z index less than .5 is classified as having characteristics of a nonfailed bank.

To evaluate the accuracy of the Z index method, it was tested on the 50 Nebraska banks included in the study. Although not perfect, the method was reasonably accurate; 48 (96 percent) of the banks were classified correctly. One failed bank was misclassified as a nonfailed bank, and one nonfailed bank was misclassified as a failed bank.

Using the Z index is simple and can be demonstrated easily with an example. Assume three banks (A, B, and C) are being analyzed by a potential banking customer or investor. Further, assume that the three banks have the operating statistics for their most recent year-end as shown in Table 3. Such information is generally available on a timely basis from the FDIC or private firms (e.g., Sheshunoff and Company). Plugging these amounts into the Z index function yields the following Z index scores:

$$A = 1.25656 + .06351(-.37) + .01983(10.33) - .07280(3.40) - .00960(5.71) - .01130(40.62) = .677$$

$$B = 1.25656 + .06351(-1.94) + .01983(6.73) - .07280(2.52) - .00960(7.89) - .01130(56.73) = .367$$

$$C = 1.25656 + .06351(1.12) + .01983(10.29) - .07280(1.89) - .00960(4.64) - .01130(46.67) = .822$$

Notice that bank B's Z index is below the cutting Z score of .5, while the Z indexes for banks A and C are above .5. This indicates that bank B possesses the characteristics of banks that have failed in the past, whereas banks A and C possess the characteristics of nonfailed banks. This does not necessarily mean that bank B will fail while A and C will not. It means that bank B's operating statistics are similar to those of banks that failed in the past, while the statistics for banks A and C are similar to those of banks that did not fail in the past.

Perhaps even more useful than classifying banks using the cutting Z score is ranking the banks. The Z indexes produced by the Z index method provide an ordinal ranking of the financial health of the banks. The higher the Z index, the greater the financial strength. For instance, the three banks used in this example would be ranked from strongest to weakest as follows:

	Z index
Bank C	.822
Bank A	.677
Bank B	.367

Any or all Nebraska banks can be ranked in this manner. One final note with respect to the Z index method is a word of caution. The method is not a panacea. Because numerous factors cannot be captured in a mathematical model, the method is not intended to replace a user's judgment. It simply is intended to provide an additional piece of information as input into the user's decision making process.

Conclusion

Bank failures in recent years have increased at phenomenal rates. The primary reason for the failures seems to be poor management. The problem of managerial deficiencies is compounded by the competitive banking environment, restrictions against branch banking, and poor economic conditions. These failures have caught the attention of the regulators and the public alike.

This article offers a method for detecting future possible bank failures The method could prove most useful when supplemented with knowledge on subjective factors such as the quality of bank management and/or the economic prospects of the community in which a bank operates.

Table 3
Ratios for Example Banks

Ratio	Bank A	Bank B	Bank C
ROA	-.37%	-1.94%	1.12%
PRIMCAP	10.33%	6.73%	10.29%
OVERHEAD	3.40%	2.52%	1.89%
NONPERF	5.71%	7.89%	4.64%
LOANS	40.62%	56.73%	46.67%
Z INDEX	.677	.367	.822

Libraries in Nebraska

According to the Nebraska Library Commission and the *Nebraska Blue Book, 1988-1989*, Nebraska's first library was established at the Fort Atkinson military post in 1820. The federal Kansas-Nebraska Act of May 20, 1854 provided a territorial library in Nebraska that later became the state law library.

The state's first public library was established in Omaha in 1871. In 1877, the state legislature passed a law providing state support of public libraries. A state library commission with responsibility for promoting, developing, and coordinating library services in Nebraska was established by the legislature in 1901.

Today Nebraska has approximately 50 academic libraries, 286 public libraries, 646 school media centers, 22 institutional libraries, 134 special libraries, and 84 county law libraries.

Love Library, located on the University of Nebraska-Lincoln campus, is the largest library in the state with a collection of approximately 1.7 million volumes. Other large libraries include the collection at the Nebraska Library Commission, the Nebraska State Library, the Lincoln City Libraries; the Omaha Public Library; and academic libraries at Creighton University and the University of Nebraska at Omaha.

These libraries participate in regional multitype service systems that provide regional support and coordination. Nebraska libraries are linked through an electronic telecommunications network to NEON, the data base of Nebraska library holdings, and to other state and national data bases.

For further information about libraries in Nebraska contact:

Nebraska Library Commission
1420 "P" Street
Lincoln, NE 68508
(402) 471-2045

Merlin W. Erickson

Global Competition: Midwest Perspective

Robert Milligan, President and CEO, MI Industries, Lincoln, Nebraska

In this paper, I will review Nebraska's role in international markets and the importance of export markets to Nebraska, the Midwest, and the U.S. I also will give an overview of economic issues that may come to the forefront in the next few years.

Let us set the stage with a background on what may happen in the 1990s. The New *York Times* and *Fortune* have christened this decade as the *era of possibilities.* Why has this decade been so named? In my opinion, we see the greatest economic opportunities since the end of World War II. We also see some of the greatest competition that we have ever known.

In Europe, we foresee the opportunity for a unified Western Europe starting in 1992. What are the implications of that unification? It means 325 million persons under a more unified system—the most unified European system the world has known in modern economic times. Europe will replace the U.S. as the world's largest, richest market

Add to Western Europe the potential that is developing for 140 million Eastern Europeans. Now add another 40 million free associate state Europeans. And finally, add the potential for 250 million Soviet customers. That brings a total of nearly 800 million customers in a targeted area. Over half those economies, or 400 million consumers, are calling for a total restructuring of their economies. The potentials are enormous.

When I started to discuss global opportunities, I may have assumed something I shouldn't assume—namely that all of us in this state, particularly with our great concern and understanding for agribusiness, look at the world as a place in which we should compete economically. In my opinion, we have only two choices: to close our borders (Nebraska or U.S.), selling and producing strictly on an internal basis, or to try to obtain a level playing field in a global arena and participate (compete) as effectively as we can in that arena. I favor the second choice of global competition

The stage is being set by a number of our political leaders, including Secretary Yeutter in the Uruguay Round. Clayton Yeutter is trying to develop a level playing field for all export competition. What does the opportunity to compete worldwide mean for Midwest or Nebraska agriculture?

Let's ask our neighbors, the Kansas wheat farmers. They would resist closing our borders because over 60 percent of their wheat crop currently is exported. Roy Frederick dramatically underscored the importance of the livestock industry to Nebraska's gross agricultural income; 60 percent to 65 percent of Nebraska's gross agricultural income comes from the livestock industry. Last year in the U.S., beef exports increased over 60 percent from the year before. For the first time, America exported more than a billion pounds of beef

Unlike the years immediately after World War II when we saw great opportunities and relatively little competition, we see our trading partners poised for strong competition. Japan is a strong competitor . . . Look at the Japanese automobile and microchip industries. Look at Britain in foods, service, and publishing; West Germany in pharmaceuticals and chemicals; Australia and Argentina in beef; France, Canada, Argentina, and Brazil in grains: These are strong competitors ready to participate in the world market.

I would like to touch briefly upon four key concepts that I believe point to a positive economic trend for the world in the 1990s. I believe that these factors support the position that the 1990s will be the decade of possibilities.

1. Democracy continues to advance globally, bringing economic change for the world. South Korea, the Philippines, Argentina, Poland, and Chile all are evolving dramatically toward a more democratic form of government. These political changes, in turn, imply economic changes in these countries.

India has ended 40 years of Gandhi rule peacefully. We also are witnessing the emergence of a more democratic form of government and changing economies in Hungary, East Germany, and Czechoslovakia. The Congress of the People's Deputies has called for free, nonmonopolistic (communist) elections in the Soviet Union. President Gorbachev's response only was to question the timing of the idea, not its merit.

Certainly there will be reversals in this trend toward a more democratic world. We have seen that in the Philippines and in Poland, where real income has dropped 20 percent. Most reversals there were due to unmet or unrealistic economic expectations, lack of capital, lack of convertible currencies, or hyperinflation. Even with the dramatic changes we have seen in leadership, stifling bureaucracies remain.

Only 70 of the 170 societies in the world today qualify as free, even using the broadest definition of the term. But I don't think there's any question that the Marxism/Leninism model is under siege.

2. There will be a lessening of tension because of the decreasing possibility of large scale military conflict. This shift means that economic performance rather than military power will count more in the future. No wonder Russia and its leadership are running fast to stay ahead of the crowd. We have seen President Gorbachev labeled the man of the decade, more influential than President Reagan. I submit that it makes no difference who's leading the Politburo. The changes in the Soviet Union were necessary because of economic changes in the world.

There always will be regional and historic tensions, such as that between Korea and Japan (there are no Japanese cars in Korea), even though we don't have large scale tensions.

Proposed reductions in military budgets over the next several years may alter our own economic development. Think of the possibilities of a $100 billion reduction in our U.S. military budget over the next several budget cycles.

3. We will continue to see a global community that will increase its technical and technological advantages. It will be smarter; we'll continue to see the world shrinking because of a vast communications explosion.

Since the mid-1960s, the percentage of high school age population enrolled in secondary education almost has doubled worldwide. College enrollment also has doubled worldwide in the last 20 years. This presents a great opportunity for telecommunications.

An official from Corning is excited about the possibility of rebuilding the telephone systems in the Soviet Union with optical fibers because there are no copper wires to remove. Even in Russia and Eastern Europe, we must be aware of the advance of science and technological ability. They have more than one-third of the world's Ph.D.-level engineers and scientists. We see advanced technology coming from these societies—soft contact lenses, surgical staples, and great advances in metallurgy, to name a few.

4. Economic interdependence of the world community will continue. Since 1950, world trade has grown twice as fast as world Gross Domestic Product. Think about what that means. Certainly, it's going to cause some uneasiness. Think of the editorials about Japanese investment in the U.S. That makes us uncomfortable.

What about Nebraska in the global competition arena? Can we compete? In the aggregate, I would say we are well prepared; we have an educated workforce that should be able to adapt. Also, our base industries in food/fiber are moving ahead. We are seeing increased focus, awareness, and participation by many Nebraska industries in sales throughout the world.

We constantly must tend the store, however. I think the U.S. now has a better focus on that than they have had in the past. We must be willing to change our businesses, to be flexible. This will mean:

1. Thinking globally.
2. Thinking new alliances (joint ventures, etc.).
3. Thinking of new ways of doing business (barter, etc.).

An Exchange Student View of Japan

Jack Hardy, Bureau of Business Research, Undergraduate Research Associate

In an era of an increasing significant international market, it is important that any business education include a study of international issues. Any study of international business should place considerable emphasis on Japanese business practices.

For the student interested in Japan, the University of Nebraska-Lincoln College of Business Administration sponsors a study abroad program at Senshu University in Tokyo.

Last semester I participated in this program and earned credits studying Japanese language, business, and civilization, while experiencing firsthand what it is like to live in a Japanese community.

At the University of Nebraska-Lincoln, I have studied basic issues related to Japanese business practices in practically every one of my business courses. The material was introductory, however, and often failed to address my particular interests in the social and cultural forces that shape Japanese commercial practices.

How are Japanese management practices, which are different from traditional American practices, applied so successfully in Japanese culture? Why does the average Japanese businessperson feel such a strong sense of organizational loyalty toward his or her company? Why are many aspects of Japanese business puzzling to Americans?

With these interests in mind, I traveled to Japan to study with 12 other students from the University of Nebraska and two students from Susquehanna University in Pennsylvania. For 12 weeks we studied Japanese language for three hours every morning and listened to lectures on Japanese business and civilization in the afternoon. Our language instruction was introductory because most of us had little, if any, experience with Japanese.

This lack was not a great hindrance for us, however; most of our instructors spoke English. Most Japanese students we met spoke some English, having studied English for six or seven years. Almost all Japanese were anxious to practice their English with us.

The business and culture lectures were presented by different faculty members of Senshu University and professional persons from the community. We heard lectures on topics such as "The Evolution of Japanese Management," "Traditional Japanese Human Relations," "The History of U.S.-Japanese Trade Conflict," and many others. Each day brought new lectures on topics that our hosts thought would be of particular interest to us.

My most memorable experiences were those outside the classroom. We visited modern institutions such as the Tokyo Stock Exchange and the Diet Building. The Diet Building houses the legislative body of Japanese government. We went on field trips to businesses and manufacturing plants such as Nissan Motor Corporation, Matsushita Research Institute, and Kirin Beer. We also went sightseeing at different historical sites, traditional temples, and shrines. During all our trips and experiences outside the classroom, we were accompanied by faculty members or Japanese students. Japanese students were as eager to try to understand us and our culture as they were to help us understand Japanese culture.

My study of Japan was valuable because I was able to integrate what I was learning about Japanese history, culture, and philosophical tradition with what I was learning about Japanese business practices.

For example, I learned that Japanese management practices such as promotion according to seniority, lifetime employment, and bottom-up decision making can be viewed as vestiges of ancient Confucian notions of filial piety, loyalty, and collective harmony.

I also discovered that as a result of their heritage as a communal society, the Japanese tend to identify strongly with the various groups with which they are associated. The tendency to feel a strong sense of corporate loyalty also can be viewed as a remnant of traditional Japanese society.

Given Japan's historic growth remote from western civilization, it is hardly surprising that American and Japanese culture and their respective business practices differ. If we fail to recognize and educate ourselves about the differences that do exist, we will continue to limit our ability to cooperate with, compete with, or influence Japan and the Japanese people.

The Japanese are focused on international issues. As a result, years of English language study are a compulsory component of every student's education.

From the moment I arrived, it was apparent that the Japanese students I met were going to take advantage of my presence. They were anxious to practice their English and learn whatever I could teach them about America.

It is on this point that we may take an important lesson from Japan. It would be, without a doubt, to our advantage to treat our international students at the University of Nebraska as valuable educational resources.

My experience in Japan made it clear to me that America's future success in international commerce depends, to a large extent, on how willing Americans are to understand other cultures.

There are opportunities for generating cross-cultural understanding abroad, as well as with the large population of international students at our university. I encourage all students and faculty at the University of Nebraska to take advantage of these opportunities.

Other international study opportunities available to College of Business Administration students include these summer programs:

- Oxford Program—Dean Gary Schwendiman, leader
- Orient Study Tour—Professors Harish Gupta and Roger F. Riefler, leaders
- Moscow Visit—Dr. Robin Anderson, leader
- Budapest School of Economics Program—Associate Dean J. Clay Singleton, leader
- The annual Pan Pacific Conference will be held May 31-June 2 in Seoul, Korea. Professor Sang M. Lee, program chairman, expects 300 participants.

Jack Hardy is a senior in economics. He is one of three undergraduate research associates with the Bureau of Business Research this spring semester. Jack is working on a project to calculate and analyze nonmetro nonfarm per capita personal income in Nebraska.

Population Growth Continues for Most Urban Areas 1980-1988

Two hundred and thirty-three of the nation's 283 metropolitan statistical areas (MSAs) gained population during the 1980-1988 period, according to recent estimates by the Bureau of the Census of the U.S. Department of Commerce. Twenty-three of the 50 MSAs that lost population are located in Michigan, New York, Ohio, Pennsylvania, and West Virginia. Four are located in Iowa.

Nebraska's two MSAs of Omaha and Lincoln gained population during the 1980-1988 period. According to Bureau of Census estimates, however, the Omaha

Table 1
Estimates of Population and Net Migration Change for the MSAs of Nebraska and Neighboring States
1980-1988

	Population Change		Net Migration Change	
State	Number	Percent	Number	Percent
Colorado				
Pueblo	1,700	1.3	-4,800	-3.8
Denver-Boulder	239,500	14.8	79,400	4.9
Greeley	12,800	10.3	1,000	0.8
Colorado Springs	84,500	27.3	43,400	14.0
Fort Collins-Loveland	32,800	22.0	18,700	12.5
Iowa				
Sioux City, IA-NE	-1,800	-1.5	-8,700	-7.4
Iowa City	5,000	6.1	-2,100	-2.6
Waterloo-Cedar Falls	-15,000	-9.2	-23,800	-14.6
Dubuque	-2,800	-3.0	-7,400	-7.6
Des Moines	24,200	6.6	-300	-0.1
Davenport-Rock Island-Moline, IA-IL	-20,500	-5.3	-41,800	-10.9
Cedar Rapids	1,700	1.0	-8,600	-5.1
Kansas				
Topeka	9,900	6.4	1,200	0.8
Wichita	40,700	9.2	600	0.1
Lawrence	8,800	13.1	3,900	5.8
Missouri				
Joplin	8,400	6.6	4,500	3.5
Kansas City, MO-KS	141,900	9.9	47,300	3.3
St. Joseph	-2,500	-2.8	-4,800	-5.5
Columbia	5,400	5.4	-2,500	-2.5
St. Louis, MO-IL	89,700	3.8	-42,500	-1.8
Springfield	26,600	12.8	16,500	8.0
South Dakota				
Sioux Falls	16,100	14.7	7,100	6.4
Rapid City	11,700	16.6	2,400	3.4
Nebraska				
Lincoln	18,700	9.7	4,500	2.3
Omaha, NE-IA	36,500	6.2	-11,100	-1.9

MSA experienced a net migration loss of 11,100. Net migration is defined as the difference between gross inmigration and gross outmigration. Gains in natural growth (births minus deaths) more than offset the migration loss.

Table 1 provides statistics on population and net migration change for the MSAs of Nebraska and neighboring states for 1980-1988.

For reporting purposes, the Sioux City, IA-NE MSA is listed under Iowa. Similarly, the Omaha, NE-IA MSA is listed under Nebraska.

MSAs are defined by the Office of Management and Budget (OMB) in terms of whole counties outside New England and individual towns and cities in New England.

The general concept of a MSA is that of a population nucleus of at least 50,000, generally consisting of a city and its immediate suburbs, together with adjacent communities having a high degree of economic and social integration with that nucleus.

An area qualifies for recognition as an MSA in one of two ways: If there is a city of at least 50,000 population or a Census Bureau-defined urbanized area of at least 50,000 with a total metropolitan population of at least 100,000 (75,000 in New England).

In addition to the county containing the main city, an MSA also includes additional counties having strong economic and social ties to the central county, determined chiefly by the extent of the urbanized areas as defined by the Census Bureau and census data on commuting to work.

MSAs with major population and(or) net migration changes for the 1980-1988 period are indicated in Table 2.

By 1988, the nation's MSA population had reached 189.4 million, amounting to 77.1 percent of the U.S. total of 245.8 million. Another 56.4 million persons lived in nonmetropolitan territory outside the 283 MSAs.

Since 1980, the population of metropolitan America, as currently defined, has increased 16.8 million (9.7 percent), well above the national average increase of 8.5 percent. Nonmetropolitan American increased only 2.4 million (4.5 percent), less than half the metropolitan rate of growth.

Most metropolitan population growth continues to occur in the Sunbelt and Far West. The metropolitan areas in the North grew only 2.2 million (2.6 percent) from 1980 to 1988, while those in the South and West grew 14.6 million (16.6 percent).

From 1980 to 1988, metropolitan areas grew faster than nonmetropolitan areas in 35 states, while the nonmetropolitan areas had the edge in 14 states. (New Jersey and the District of Columbia are entirely metropolitan.) The states with more rapid nonmetropolitan growth are Massachusetts, Rhode Island, Connecticut, Delaware, Maryland, Florida, California, Alaska, Hawaii, West Virginia, Ohio, Michigan, Wisconsin, and Wyoming.

F. Charles Lamphear

Table 2

MSAs that Gained over 1/2 Million in Population

MSA	Population Growth
Los Angeles-Anaheim-Riverside	2,272,000
Dallas-Ft. Worth	835,500
San Francisco-Oakland-San Jose	673,900
Atlanta	598,400
New York-Northern New Jersey-Long Island	580,700
Houston-Galveston-Brazoria	541,500
Phoenix	520,400
San Diego	508,600

MSAs that Gained over 250,000 by Net Migration

MSA	Net Migration Gain
Miami-Fort Lauderdale	269,700
San Francisco-Oakland-San Jose	309,100
San Diego	332,000
Phoenix	369,000
Tampa-St. Petersburg-Clearwater	382,000
Atlanta	414,000
Dallas-Fort Worth	496,600
Los Angeles-Anaheim-Riverside	1,142,700

MSAs that Lost over 50,000 in Population

MSA	Population Loss
Pittsburgh-Beaver Valley	-139,200
Detroit-Ann Arbor	-132,500
Buffalo-Niagara Falls	-67,200
Cleveland-Akron-Lorain	-65,100

MSAs that Lost over 50,000 by Net Migration

MSA	Net Migration Loss
Detroit-Ann Arbor	-364,300
Chicago-Gary-Lake County	-290,000
Cleveland-Akron-Lorain	-180,200
Pittsburgh-Beaver Valley	-168,100
Buffalo-Niagara Falls	-99,400
New York-Northern New Jersey-Long Island	-92,800
Milwaukee-Racine	-92,700
New Orleans	-50,400

MSAs Where Deaths Exceeded Births

Bradenton, FL
Daytona Beach, FL
Sarasota, FL
Scranton-Wilkes-Barre, PA
Tampa-St. Petersburg-Clearwater (ranked 10th in actual population growth)

Review and Outlook

John S. Austin, Bureau of Business Research, Research Associate

National Outlook

The second revision of the fourth quarter 1989 Gross National Product (GNP) statistics is now available. These figures will remain official until the July revision. In general, this set of numbers shows a stronger economy than did the preliminary numbers. This set of figures improves our view of the fourth quarter and will help us speculate on the first quarter of this year.

The fourth quarter increase was 11.2 billion 1982 dollars at annual rates. Unfortunately, most of that increase, $9.9 billion or some 86.1 percent, can be accounted for by a change in net exports. Net exports are simply exports minus imports. The net export figure itself is a fairly small component of GNP and, furthermore, tends to contain a great many data errors. Put another way, without the strong positive net export figure, GNP would have grown only about .1 percent, instead of the revised 1.1 percent in the latest figures.

Net exports has been a source of strength in the last few years. Early indications, however, are that first quarter net exports may be weak. A surge in oil imports of 44 percent in January implies a weak net export figure for the first quarter. That, in turn, implies that we should be looking elsewhere for strength.

Table I
Real GNP Fourth Quarter 1989
Change from Third Quarter

	Change $ billion (1982)	Percent of Total Change
Consumption	3.6	31.3
Investment	-7.1	-61.7
Government	5.1	44.3
Net Exports	9.9	86.1
Total	11.2	100.0

Note: There is a rounding error of 0.3 billion in the total.

Consumers increased their purchases 3.6 billion 1982 dollars. Virtually all of the increase was due to increases in consumer services. Durable spending decreased $16.1 billion. That decrease alone was bigger than the total gain in real GNP in the quarter. The decrease in durables was due to an automobile sales collapse.

Looking at first quarter figures, January was a good month for autos, but February data show a reversal. Unless there is a major dealer incentive program instituted early in March, first quarter auto sales likely will remain weak, pointing to a weak consumer durable number. Relatively high prices of energy and food in January in turn imply a weak nondurable consumption figure. All these suggest that the first quarter will show a weak consumption sector. Confusing this picture somewhat, the retail sales reports for January and February show a substantial advance over fourth quarter numbers. At best, consumption offers a mixed picture.

In the government sector, we see a seesaw pattern from quarter to quarter. The fourth quarter showed a decrease in federal spending offset by an increase in state and local spending. The total showed an increase of 5.1 billion 1982 dollars, 44.3 percent of the total increase in GNP. In the first quarter, we expect more cuts in federal defense expenditures, implying a weak federal sector. State and local spending will continue to grow and is likely to offset the decrease in federal spending. On the whole, I expect a small plus for total government spending in the first quarter of 1990.

Things start to get interesting in the investment block. In total, the investment

Table II
Employment in Nebraska

	Revised January 1990	Preliminary February 1990	February % Change vs. Year Ago
Place of Work			
Nonfarm	706,857	712,339	3.3
Manufacturing	95,789	95,673	2.1
Durables	46,715	46,700	1.3
Nondurables	49,074	48,973	2.8
Mining	1,232	1,284	-1.8
Construction	22,395	22,249	8.4
TCU*	46,328	46,583	4.1
Trade	184,279	182,986	2.7
Wholesale	53,978	53,924	5.5
Retail	130,301	129,062	1.6
FIRE**	48,557	48,560	2.0
Services	167,028	170,006	3.5
Government	141,249	144,998	3.9
Place of Residence			
Civilian Labor Force	823,693	826,557	3.72
Unemployment Rate	3.1%	2.8%	

*Transportation, Communication, and Utilities
**Finance, Insurance, and Real Estate

Source: Nebraska Department of Labor

Table III
Price Indices

	February 1990	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U* (1982-84 = 100)			
All Items	128.0	5.3	5.2
Commodities	120.6	5.5	5.4
Services	136.0	5.1	5.1
Producer Price Index (1982 = 100)			
Finished Goods	117.4	5.1	5.5
Intermediate Materials	112.5	1.4	2.0
Crude Materials	106.9	5.8	5.7
Ag Prices Received (1977 = 100)			
Nebraska	161	0.6	0.6
Crops	125	-11.3	-10.6
Livestock	184	6.4	5.8
United States	153	3.4	3.4
Crops	135	-2.2	-2.5
Livestock	171	8.2	8.5

U* = All urban consumers
Source: U.S. Bureau of Labor Statistics

sector decreased 7.1 billion 1982 dollars in the fourth quarter. Virtually all the decrease was in producers' durable equipment expenditures. That group had been a source of strength in 1987 and 1988. In 1989, the increases in producers' durable equipment investment slowed.

In the first quarter 1990, there is some hope that producers' durable equipment expenditures will return to the plus column. In addition, we have seen some recovery in the housing area. The latter increases could be shut off if long-term interest rates continue to climb. Housing starts have been the one ray of hope in our previous educated guesses for the 1990 outlook. Recent mortgage rate increases, however, have diminished hopes for a rapid recovery in that sector. Diminished hopes in the housing sector imply that the chances of a more rapid overall recovery are lessened.

Both consumer and producer prices jumped dramatically in January as a result of cold weather on the east coast. Cold weather created a surge in demand for fuel oil and damaged fruit and vegetable crops in Florida. In February, we saw a mixed result. Decreasing energy prices allowed the Producer Price Index to remain even with January levels; however, consumer prices rose 0.5 percent in February. The increase in consumer prices was a result of a mixture of events. There was an 18.7 percent drop in fuel oil prices, but a sharp 3.3 percent jump in clothing prices. Food prices grew 0.5 percent in February. The clothing price index was unique, being related to an early introduction of spring clothes. The increase in apparel is not expected to be repeated in the March figures. Thus, there is some hope of further easing in the Consumer Price Index for March. Nevertheless, inflation has to be monitored closely. It is rapid inflation and an improper reaction by monetary authorities that often have been associated with economic downturns.

There are two predominant schools of thought about what will happen to interest rates in the next few months. One school posits that our weak domestic economy will allow the Federal Reserve to stimulate the economy further by lowering interest rates. There is little doubt that the Fed can control short-term interest rates, especially the Federal Funds rate. The Fed

Table IV
City Business Indicators
December 1989 Percent Change from Year Ago

The State and Its Trading Centers	Employment (1)	Building Activity (2)
NEBRASKA	0.1	17.1
Alliance	-0.9	-62.4
Beatrice	-0.1	84.0
Bellevue	-0.3	42.3
Blair	-0.3	-34.8
Broken Bow	0.4	-94.7
Chadron	-0.7	-3.9
Columbus	0.7	75.3
Fairbury	0.8	7.3
Falls City	-0.4	75.1
Fremont	-0.3	37.6
Grand Island	-0.6	-20.9
Hastings	0.0	62.7
Holdrege	0.1	695.1
Kearney	0.9	94.6
Lexington	1.3	111.3
Lincoln	1.1	25.3
McCook	1.0	186.1
Nebraska City	-0.1	175.7
Norfolk	0.1	49.4
North Platte	-0.5	10.9
Ogallala	-0.7	-6.7
Omaha	-0.3	-1.1
Scottsbluff/Gering	-0.5	-7.4
Seward	0.7	35.7
Sidney	1.0	-60.0
South Sioux City	-1.7	-51.3
York	-0.5	16.9

(1)As a proxy for city employment, total employment (labor force basis) for the county in which a city is located is used

(2)Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes

Sources: Nebraska Department of Labor and reports from private and public agencies

Figure I
City Business Index
December 1989 Percent Change from Year Ago

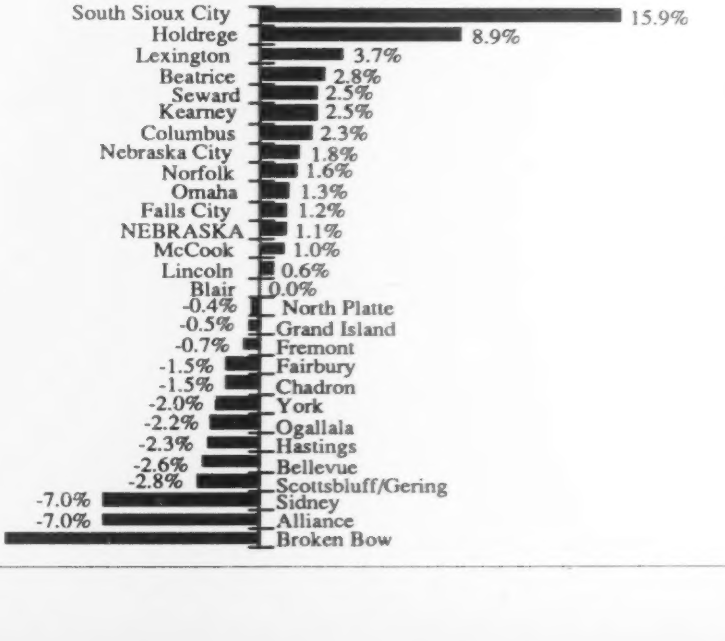
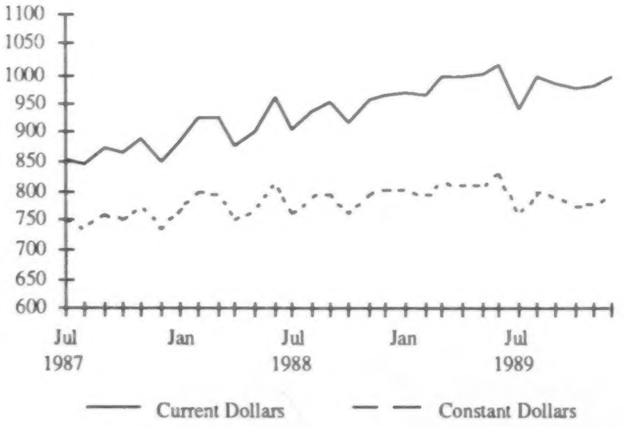


Table V
Net Taxable Retail Sales of Nebraska Regions and Cities

Region Number and City (1)	City Sales (2) December 1989 (000s)	City Sales (2) % Change vs. Year Ago	Region Sales (2) December 1989 (000s)	Region Sales (2) % Change vs. Year Ago	YTD % Change vs. Year Ago
NEBRASKA	$1,125,019	4.7	$1,219,349	3.1	6.0
1 Omaha	406,039	7.7	477,712	5.5	7.3
Bellevue	18,255	-5.6	*	*	*
Blair	5,723	9.4	*	*	*
2 Lincoln	144,137	1.9	158,900	1.8	3.4
3 South Sioux City	6,900	51.3	8,592	38.0	15.8
4 Nebraska City	4,482	-2.9	19,245	0.8	2.6
6 Fremont	18,973	-0.8	32,960	-2.1	4.2
West Point	3,489	11.6	*	*	*
7 Falls City	2,760	1.0	10,116	-4.8	-0.8
8 Seward	5,613	5.7	16,838	-2.6	2.0
9 York	8,398	-1.8	17,707	-4.3	3.7
10 Columbus	19,299	2.5	31,514	-0.2	4.4
11 Norfolk	25,156	3.2	40,796	-0.9	4.7
Wayne	3,278	6.0	*	*	*
12 Grand Island	45,078	6.2	59,660	5.7	7.7
13 Hastings	19,439	-6.7	30,010	-2.9	5.2
14 Beatrice	10,493	3.8	21,302	-2.1	1.3
Fairbury	3,619	-1.0	*	*	*
15 Kearney	24,310	1.6	32,275	0.3	7.1
16 Lexington	7,787	3.0	18,279	-3.5	4.9
17 Holdrege	5,091	1.5	8,521	-4.9	4.9
18 North Platte	20,028	2.5	24,148	2.0	6.2
19 Ogallala	5,903	0.5	11,433	-5.5	8.7
20 McCook	9,467	-6.4	12,798	-7.8	2.2
21 Sidney	4,594	-2.9	8,614	-3.2	-1.0
Kimball	1,849	0.3	*	*	*
22 Scottsbluff/Gering	23,287	-1.1	30,410	-0.3	6.3
23 Alliance	6,322	-0.3	15,806	-6.9	2.1
Chadron	3,420	1.7	*	*	*
24 O'Neill	5,396	3.6	16,265	-0.7	9.6
Valentine	3,073	3.4	*	*	*
25 Hartington	1,778	11.6	9,330	-1.7	1.2
26 Broken Bow	4,288	10.5	13,315	-2.1	3.9

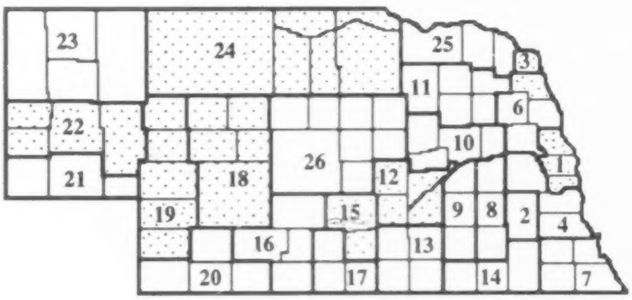
(1) See region map
(2) Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales
* Within an already designated region
Compiled from data provided by the Nebraska Department of Revenue

Figure II
Nebraska Net Taxable Retail Sales
(Seasonally Adjusted, $ Millions)



(1) The Consumer Price Index (1982-84 = 100) is used to deflate current dollars into constant dollars

Figure III
Region Sales Pattern
YTD as Percent Change from Year Ago



Shaded areas are those with sales gains above the state average. See Table V for corresponding regions and cities

Mailing List Update

Business In Nebraska, a publication of the Bureau of Business Research, University of Nebraska-Lincoln is provided as a public service free of charge. In order for us to maintain an accurate mailing list and to ensure that *Business In Nebraska* is meeting the needs of our subscribers we ask that you take a moment to complete the following.

1. Do you wish to continue receiving BIN? Yes __ No __
2. Is the information shown on the mailing label correct? Yes __ No __
   If No, please fill in the correct information below.

   ____

   ____

   ____

   ____

   ____

3. What is your title/occupation? ______________________________
4. In what type of business activity does your company engage? ______________________________

   ____

   ____

Please detach this page, fold it in thirds, and drop in any mail box. No postage is necessary. Thank you.

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 355 LINCOLN, NE

POSTAGE WILL BE PAID BY ADDRESSEE

University of Nebraska–Lincoln
The Bureau of Business Research
200 College of Business Administration-0406
LINCOLN NE 68501-9988

has nailed the Federal Funds rate at 8.25 percent for several months now.

The other major school of thought argues that long-term rates are set in an international market. Both the Japanese and the Germans are experiencing rising long-term interest rates. The U.S. must follow these rates if it is to remain competitive in the international arena. If not, we will see a capital outflow from the U.S. to other countries.

The review of these two approaches reminds one of the old forecasters' axiom that "if it doesn't go up, it'll go down, if it doesn't stay the same." My best guess is that risks are on the up side, especially in the long-term markets. International pressures will impact our domestic long-term markets. Further, there is some cause for concern on inflation, as nonfood and nonenergy prices are showing some increases.

Nebraska Outlook

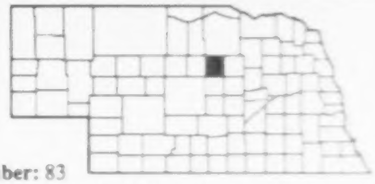
Retail sales are available for all of 1989. For the year as a whole, there was an advance of 6.0 percent (see Table V upper right corner). With inflation rates on consumer goods at 4.5 percent, the nominal growth that Nebraskans have experienced translates to a 1.5 percent real growth in retail sales. Sales were fairly flat from March on. Nebraska's December season was somewhat listless.

Year-end labor force data show virtually no change from year-end 1988 (Table IV). In contrast, February job gains were 3.3 percent ahead of year ago (Table II), continuing a trend of job gains outpacing increases in the labor force. The two fastest growing job areas were wholesale trade and construction.

Early year construction data are available from F. W. Dodge. So far the state has continued last year's stellar performance. Through February, year-to-date total contracts have increased 28.6 percent. Total building square footage has increased 50.4 percent. New dwelling contracts have increased 54.4 percent. All of these increases must be taken with a grain of salt. The early months of the years are influenced heavily by weather changes. In our case, both January and February were relatively good building months. Should the March figures reinforce the January-February numbers, then Nebraska construction may be started on an extremely good year.

County of the Month

Garfield



Burwell--County Seat

License plate prefix number: 83
Size of county: 570 square miles, ranks 64th in the state
Population: 2,100 (estimated) in 1988, a change of -9.3 percent from 1980
Median age: 38.7 years in Garfield County, 29.7 years in Nebraska in 1980
Per capita personal income: $11,558 in 1987, ranks 88th in the state
Net taxable retail sales ($000): $12,038 in 1988, a change of -20.4 percent from 1987; $11,981 during 1989, a change of -0.5 percent from the same period one year ago
Number of business and service establishments: 82 in 1987; 62.2 percent had less than five employees
Unemployment rate: 4.6 percent in Garfield County, 3.6 percent in Nebraska for 1988
Nonfarm employment (1988):

	State	Garfield County
Wage & salary workers	688,146	632
	(percent of total)	
Manufacturing	13.8%	8.7%
Construction and Mining	3.8	4.9
TCU	6.5	3.2
Retail Trade	18.5	22.5
Wholesale Trade	7.3	9.6
FIRE	7.0	3.8
Services	23.0	22.3
Government	20.1	25.0
Total	100.0%	100.0%

Agriculture:
Number of farms: 248 in 1987, 268 in 1982
Average farm size: 1,314 acres in 1987
Market value of farm products sold: $18.8 million in 1987 ($75,818 average per farm)

Sources: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, Nebraska Department of Labor, Nebraska Department of Revenue

Merlin W. Erickson

Business in Nebraska
PREPARED BY BUREAU OF BUSINESS RESEARCH
Association for University Business & Economic Research

Address Correction Requested

Business in Nebraska is issued as a public service and mailed free of charge upon request to 200 CBA, University of Nebraska-Lincoln, Lincoln, NE 68588-0406. Copyright 1990 by Bureau of Business Research, University of Nebraska-Lincoln. ISSN 0007-683X.

April 1990, Volume 45 No. 547

University of Nebraska-Lincoln-- Martin Massengale, *Chancellor*
College of Business Administration--Gary Schwendiman, *Dean*

Bureau of Business Research
F. Charles Lamphear, *Director*
Merlin W. Erickson, *Research Associate*
Margo Young, *Communications Associate*
John S. Austin, *Research Associate*
Barbara Sunsion, *Composing Technician*
Lisa Darlington, *Secretary*
Carol Boyd, *Secretary*
Dave DeFruiter, *Information Systems Coordinator*

The University of Nebraska-Lincoln does not discriminate in its academic, admission, or employment programs and abides by all federal regulations pertaining to same.

Nonprofit Org.
U. S. Postage
PAID
Lincoln, Nebraska
Permit No. 46

CONGRESSIONAL INFO SERVIC270238
SR I 8R
4520 EAST-WEST HWY
BETHESDA, MD 20814

U7860-1

Business In Nebraska

May 1990
Vol. 45 No. 548

Prepared by the Bureau of Business Research
200 College of Business Administration
University of Nebraska-Lincoln
Lincoln, NE 68588-0406
402/472-2334

Perestroika and the Prospects for Trade

Craig R. MacPhee
Chair and Professor
Department of Economics, UNL

Miranda Otradovsky
Graduate, Institute of International Studies
Geneva, Switzerland

Introduction

In recent months, remarkable events in the Soviet Union and Eastern Europe have filled the news. These changes have attracted the attention of American businesses eager to profit from increased U.S. trade with the restructured nonmarket economies. Although trade with the nonmarket economies is often sporadic, their trade with the U.S. is on the rise, with two way trade up 34 percent over 1988 to $6.5 billion for January-September of 1989. These developments are potentially important to Nebraska's economy—a substantial amount of this trade represents agricultural commodities. This article assesses U.S. prospects for expanded trade with the nonmarket economies.

Three-quarters of U.S. exports to the Soviet Union are farm products. The U.S.S.R. is the largest single market for exports of U.S. grain. Corn is the leading U.S. export to the Soviets and East Europe. Wheat is the second largest export to the U.S.S.R. and the leading export to China.

Nebraska ranked fourth among American states in agricultural exports for 1987. Nebraska corn and other feed-grain exports amounted to $535 million in 1987 and accounted for one-third of Nebraska production. Nebraska wheat exports in 1987 amounted to $99 million, almost half of Nebraska's harvest.

Table 1 shows the estimates of Nebraska's rank in agricultural commodity exports for the 1988 fiscal year. In 1988, Nebraska contributed $2,118 million (6.55 percent) to total U.S. agricultural exports. In some commodity groups, the state's percentage contribution was much higher. In the feed grains and products group, which includes corn exports, Nebraska contributed $760.6 million (12.21 percent) of U.S. feed grain exports. Clearly, Nebraska's agricultural exports play a significant role in U.S. agricultural trade.

Therefore, a substantial increase in agricultural exports to the nonmarket economies would have a significant positive impact on the Nebraska economy.

Table 1
Nebraska's Rank Among States in Agricultural Commodity Exports 1988

Commodity Group	Nebraska's Rank
Soybeans & Products	7
Feed Grains & Products	3
Hides & Skins	3
Live Animals & Meat	3
Feed & Fodder	3
Animal Fats	3
Seeds	4
Total	6

Source: *Foreign Agricultural Trade of the United States* (March/April 1989)

Given the pace of change in Eastern Europe and the Soviet Union, conditions seem ripe for improving trade ties with these economies. There are several hundred million potential consumers of American products in Eastern Europe, not to mention over one billion potential consumers in China.

After decades of isolation from world trade, modern technology, and western consumerism, many East European governments are abandoning centralized planning in favor of freer markets. Socialism's inefficiency and rigidities led to chronic shortages of consumer goods. The public was obliged to save, because there was little to purchase. It is estimated that approximately 200 billion rubles ($320 billion at official exchange rates) lie dormant in savings accounts in the Soviet Union. American businesses have been eyeballing this gigantic pent-up demand for goods with considerable optimism, but before the U.S. banks on increased sales, it would be wise to take a more realistic view of trade prospects with the nonmarket economies.

The policies of Eastern Europe and the Soviet Union are moving in the direction of freer trade. The U.S. has negotiated trade agreements with China, Hungary, Poland, and the U.S.S.R. to give them equal access to the U.S. market. A new grain agreement between the U.S. and the Soviet Union sets minimum purchases of grain from the U.S. at 10 million metric tons per year, an 11 percent increase from the current grain agreement, and will allow the Soviets to purchase up to 14 million metric tons without additional consultation. The new agreement is expected to be signed at the June summit meeting between President Bush and Gorbachev and will become effective by January 1, 1991. Despite these trade agreements, there are still many problems to be resolved before either the Soviet Union or Eastern Europe will be capable of significantly increasing their participation in world trade.

Convertibility of Foreign Exchange

Several factors hinder the development of trade relations with the nonmarket economies. The greatest obstacle to trade between nonmarket economies and market economies is the inconvertibility of their currencies. Inconvertibility means that some holders of rubles, for instance, cannot exchange them for dollars or other currencies. If Poland were to export coal to the Soviet Union, it might receive 10,000 rubles; however, the rubles would be useless to Poland as payment for purchases from anyone other than the U.S.S.R. Without true convertibility, foreign transactions are reduced to cumbersome bilateral barter. Nebraska grain traders might be able to sell more corn, for instance, only if they were willing to take Soviet textiles in return. This barter is referred to often as *counter trade*.

Everyone agrees that full convertibility is a precondition for continued trade expansion, but how likely is it? Devoid of foreign exchange reserves, many nonmarket economies cannot maintain the artificially high values of their currency with complete convertibility. With the exception of the Polish zloty (devalued 31 percent to 9500 per dollar and now partially convertible), Yugoslav dinar, and Czech koruna, the nonmarket economies currencies are grossly overvalued. The mark of the German Democratic Republic nominally equals the mark of the Federal Republic of Germany, but its black market value is only 10 percent of the official value. The official Soviet exchange rate of 0.64 rubles per dollar contrasts with a rate of 15 per dollar bid recently in a limited auction open to enterprises in the U.S.S.R. Soviet authorities intend to ameliorate the financial situation gradually, yet they do not expect to have a fully convertible ruble before the year 2000. Even after China devalued to 4.72 yuan per dollar in December, black market rates were about 6 per dollar.

Poland's move to make the zloty convertible has been a painful one. Within days of new economic reforms, prices jumped dramatically in Poland. Bread prices rose 38 percent, home electricity 400 percent, coal for home heating 600 percent, and telephone calls 100 percent, all in response to reforms. By the end of 1989, Poland's annual inflation rate had reached 500 percent.

The Polish government has received assistance from 15 countries who have created a $1 billion fund to stabilize the zloty. This fund may prove successful for the Polish economy, although it is uncertain whether other nonmarket economies will be given the chance to benefit from such a program.

Depreciation of nonmarket economy currencies probably would depress exports from Nebraska and the rest of the United States for several reasons: (1) Depreciation makes U.S. goods more expensive within the nonmarket economies if exchange rate changes are passed through to prices; (2) In order to be effective, devaluation must be accompanied by restrictive monetary and fiscal policies. These policies may have the immediate effect of lowering the output and incomes of enterprises and consumers; (3) If prices within nonmarket economies are allowed to adjust to international levels, they will rise and wipe out the real purchasing power of hundreds of billions of rubles, yuan, etc., that persons have been forced to hold in savings because of shortages of consumer goods. Eastern Europeans may want more Nebraska wheat and feed grains, but after their currencies depreciate, they will have less purchasing power than they currently hold.

The Prospects for Nonmarket Economy Exports

Growth in transactions with the West does not appear likely in the near future, because many nonmarket economies already have large trade deficits with western economies. In order for trade to increase, the nonmarket economies must be able to export more goods to the West or be able to finance their imports with increased credit from the West. What are the prospects for these conditions to be met?

At present, the nonmarket economies export mainly clothing, footwear, simple consumer electronics, fuels, and unsophisticated manufactured products. The quality of many of these products is poor, and the supply to the U.S. from developing countries is abundant. These factors present the question of whether the U.S. economy would be willing to import more of these goods and, if so, what the reaction might be from some of the depressed American industries that would be competing with nonmarket economy products? Many industries in the nonmarket economies are highly subsidized by their governments. These subsidies could cause countervailing duties to be imposed on nonmarket economy products upon entry into the U.S. An opportunity exists to create a brokerage service that would convert nonmarket economy products into more usable cash or credit.

Government restrictions on exports also can reduce international trade. Nonmarket economy governments often have restricted the exports of goods that are in short supply. The U.S.S.R. embargoed exports of refrigerators, washers, TVs, shoes, coffee, and caviar last year when the Poles increased their purchases. Nebraskans, too, are well aware of U.S. government embargoes on shipments of grain to the Soviet Union.

Financing Nonmarket Economy Imports

The nonmarket economies need imports in order to reform their economies and revitalize industries. But if they cannot export more now, they need to borrow more. The gravity of the situation in the nonmarket economies and the need for financial assistance is obvious; however, the record of the nonmarket economies to meet debt payments is not encouraging. Furthermore, the swift and large scale changes in government, while laudable in their movement toward democracy, add further elements of uncertainty to their financial standing. The new governments simply do not have financial track records. West Germany and Japan, with large current account surpluses, stand ready to increase loans to these countries, but these look as risky as loans to developing countries in the 1970s. The U.S. cannot increase total lending overseas, however, without reducing its trade deficit. With the U.S. economy running at full capacity, the U.S. cannot reduce its trade deficit unless it cuts real domestic investment or consumption of public and private goods. Thus, the U.S. can finance increased exports to the nonmarket economies only by diverting money from other areas that are also in serious need of resources.

Increased foreign investment is another way the nonmarket economies might be able to import capital and reform their economies. Poland's reforms and the agreement recently signed between the U.S. and Poland are designed to promote trade and investment. Under the new Polish-U.S. accord, U.S. investors are to receive the same treatment as local investors, and U.S. investors will be allowed to bring their profits home. Allowing repatriation of profits is important in order to attract foreign investment, but many nonmarket economies have yet to follow Poland's lead. Currency convertibility is also necessary for effective repatriation of profits.

Political instability may discourage foreign investment. Recent events in China indicate how quickly rules can be changed to the government's convenience without regard for economic implications.

Over the past few years, joint ventures between nonmarket economy enterprises and western firms have increased because most nonmarket economies will not allow wholly owned foreign subsidiaries to operate inside their borders. An estimated 750 joint ventures were operating in the Soviet Union at the end of 1989, compared with a mere 23 in 1987 and 168 in 1988. The rise in joint ventures resulted from the Soviets abandoning their insistence on 51 percent ownership and control by their executives. Most of these joint ventures involve computer hardware and software, consumer goods, and domestic trade. Despite the dramatic rise in the number of joint ventures, most nonmarket economy governments still want domestic control, favor inefficient counter trade, and limit the repatriation of profits. Where nonmarket economies currencies are nonconvertible, repatriation of profits can be conducted only by exporting available items from the nonmarket economies. These barter arrangements can be expensive in time and money for the western partner in the joint venture and could be financial suicide if the firm is unfamiliar with the product and the market.

The potential inefficiencies of this barter system are illustrated by the recent Pepsi contract with the U.S.S.R. Here, a soft drink company transformed itself into a wholesale distributor of ships and vodka in order to pursue its original line of business in the U.S.S.R.

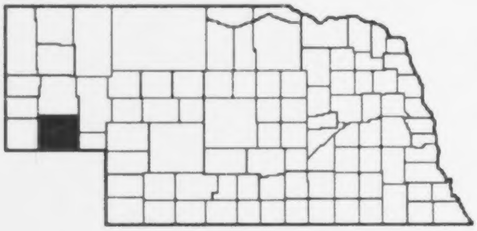
Foreign investors in the Soviet Union and in other nonmarket economies face additional problems such as inflexible wages and prices and an inadequate infrastructure. The nonmarket economies also need to establish important economic institutions, such as stock and bond markets, a credit and banking system, and other

---

County of the Month

Cheyenne

Sidney--County Seat



License plate prefix number: 39
Size of county: 1,186 square miles, ranks 11th in the state
Population: 10,000 (estimated) in 1988, a change of -0.3 percent from 1980
Median age: 32.8 years in Cheyenne County, 29.7 years in Nebraska in 1980
Per capita personal income: $15,841 in 1987, ranks 17th in the state
Net taxable retail sales ($000): $57,777 in 1989, a change of +1.5 percent from 1988
Number of business and service establishments: 321 in 1987; 64.5 percent had less than five employees
Unemployment rate: 2.6 percent in Cheyenne County, 3.6 percent in Nebraska for 1988
Nonfarm employment (1989):

	State	Cheyenne County
Wage & salary workers	705,672	3,982
	(percent of total)	
Manufacturing	13.4%	9.4%
Construction and Mining	3.6	3.0
TCU	6.5	8.5
Retail Trade	18.5	36.8
Wholesale Trade	7.6	4.9
FIRE	6.8	3.1
Services	23.7	13.2
Government	19.9	21.1
Total	100.0%	100.0%

Agriculture:

Number of farms: 740 in 1987, 701 in 1982
Average farm size: 1,035 acres in 1987
Market value of farm products sold: $94.4 million in 1987 ($127,575 average per farm)

Sources: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, Nebraska Department of Labor, Nebraska Department of Revenue

Merlin W. Erickson

components of private enterprise such as an accounting system, a system of property rights, copyrights, patents, and contract law. Obviously, such institutions cannot be established overnight—it is unlikely that foreign investment will be able to give the nonmarket economies the purchasing power to buy U.S. exports in the near future.

What if Perestroika Succeeds?

Suppose that the nonmarket economies succeed in restructuring their economies. Assume that their production becomes unsubsidized and unregulated, that wages, prices, interest rates, and exchange rates are free to move up and down, that consumers are not subject to rationing, that trade and other international transactions are unrestricted, and that the nonmarket economy governments follow prudent monetary and fiscal policies. Successful perestroika would mean that resources in the nonmarket economies would be reallocated to their most economically efficient uses. But what would the reallocation mean for the Nebraska economy?

Paradoxically, success of reforms in the nonmarket economies could limit the expansion of U.S. agricultural exports. Many of the nonmarket economies appear to have a comparative advantage in producing agricultural products and, until now, they have had to import only because socialist regulations prevented them from realizing their comparative advantage. To the extent that Nebraska exports consist of agricultural products, successful perestroika could dampen Nebraska's agricultural commodity exports. Nebraska manufacturers of farm equipment and processed foods, however, might benefit.

The Soviet Union is pushing for gradual use of hard currency within its own farm program. On an experimental basis, farmers producing exceptional yields of wheat, peas, lupine, and oil seeds are to be paid in hard currency that they may use for purchases of western goods such as tractors. In many instances, however, the promised hard currency has not been forthcoming, thus undermining the credibility of the Soviet government and demoralizing the farmer. But if such programs were successful, it is possible that the depressed yields in Soviet agriculture

(continued on page 12)

Our College Graduates' Decisions Where to Live and Work: Part I

Randy Eck
Graduate Assistant, Bureau of Business Research, UNL

Where our college graduates decide to live and work has long-term economic implications for Nebraska's future. Many questions need to be examined. For example, for what do Nebraska graduates look in a place to work? In a place to live? What are the main causes for some graduates leaving the state?

A recent study by the Bureau of Business Research sought to find answers to these and similar questions concerning where the state's graduates choose to live and work. The major findings of this study will be reported in a three part series in *Business in Nebraska*. This first part introduces the nature of the study and reports some of the general findings.

A report released by the Nebraska Department of Economic Development (NDED) in the early 1980s showed the extent of the exodus of college graduates from Nebraska for the period 1975 through 1980. Based upon data collected from the 1980 census, the report showed that the highest outmigration rate from Nebraska for 1975-1980 was among the unemployed with college degrees.

Of the 119,040 individuals moving into Nebraska during that period, 31,600, or 26.5 percent, had college degrees. Of the 131,400 persons leaving Nebraska, 38,880, or 29.6 percent, held college degrees. In terms of degree holders, the state experienced a net loss of 7,280 college graduates. That net loss was referred to by many as the state's *brain drain* for the 1975-1980 period.

A recent report by the Nebraska Alumni Association showed that approximately 46 percent of the University of Nebraska-Lincoln's (UNL) graduates for the period 1971 through 1989 reside outside Nebraska. The 46 percent figure is well below the comparable figure for 1951

Table 1
Response Rate of Nebraska Universities

School	Total Possible Responses	Response Rate Percent	Total Responses	In-State	Out-of-State
UN-Lincoln	492	55.3	272	124	148
UN-Medical Center	100	61.0	61	25	36
UN-Omaha	183	58.5	107	51	56
Wayne State	58	56.9	33	19	14
Union College	25	80.0	20	7	13
Concordia	29	75.9	22	10	12
Nebraska Wesleyan	30	36.7	11	7	4
Doane	23	60.1	14	6	8
Midland Lutheran	24	54.2	13	9	4
Saint Mary	22	59.0	13	9	4
Kearney	162	56.7	92	36	56
Dana	10	50.0	5	3	2
Creighton	189	46.6	88	43	45
No Response	4		4	2	2
Total	1351*		755	351	404

*The total possible response column takes into account those questionnaires that could not be delivered or forwarded by the postal service through 1970. The Alumni Association office reported the figure for that period to be 60 percent.

A recent study by the Institutional Research Planning and Fiscal Analysis Department at UNL showed that 10.9 percent of the present student population at UNL are out-of-state students. A comparison of the 10.9 percent rate and the 46 percent outmigration figure cited earlier for UNL indicates that substantial numbers of Nebraska's resident population with college degrees leave the state to pursue careers elsewhere.

The student migration pattern for UNL may not describe the pattern for Nebraska's independent colleges. Data from Dana College, for example, show that 58 percent of Dana's 1989 graduates remained in Nebraska. The proportion of out-of-state students in the 1989 class was 48 percent, indicating that after graduation a significant number of out-of-state students decided to remain in Nebraska.

Data reported by the Nebraska Coordinating Commission for Post-Secondary Education indicate that, on average, 42 percent of the student populations of independent colleges in Nebraska are out-of-state students. That figure compares with 10.9 percent for UNL.

Two tentative conclusions can be drawn from these data and reports on college graduate migration. First, college graduate migration appears to have declined in recent years.

Second, the college graduate migration pattern appears to differ between the state's public and private institutions of higher learning. With the college graduate migration still high, it is important to identify reasons why Nebraska college graduates decide to work and live elsewhere.

Mail surveys measuring demographic and attitude characteristics were sent to a random selection of individuals who had graduated from Nebraska four year colleges and universities from September 1983 to June 1988.

From the college graduate pool of thirteen four year colleges and universities in Nebraska and for the time period just cited, an equal sample of out-of-state and in-state residents were contacted.

The sample of contacts was based on the proportion of college graduates by institution relative to the total number of

Table 2
Profile of Nebraska and Out-of-State Residents

	% Respondents	
Statement	Nebraska	Out-of-State
Gender		
Male	45%	51%
Female	54%	48%
Household Income		
Less than $5,000	2%	1%
$5,000-$7,499	2%	1%
$7,500-$9,999	1%	1%
$10,000-$14,999	5%	4%
$15,000-$19,999	10%	7%
$20,000-$24,999	11%	10%
$25,000-$34,999	21%	17%
$35,000-$49,999	20%	24%
$50,000 or more	25%	33%
Population City/Town		
Less than 1,000	5%	3%
1,000 to 2,499	5%	3%
2,500 to 9,999	8%	6%
10,000 to 19,999	4%	3%
20,000 to 39,999	7%	7%
40,000 to 79,999	1%	10%
80,000 to 199,999	15%	11%
200,000 to 499,999	29%	11%
500,000 or more	23%	44%
Education Level		
< 12th grade	0	0
12 (high school graduate)	0	0
Some college	1%	<1%
College (undergraduate)	62%	61%
Masters	26%	19%
Doctorate	10%	19%
Age		
Less than 21	<1%	0
21 to 25	18%	20%
26 to 30	48%	51%
31 to 35	17%	14%
36 to 40	7%	7%
41 to 45	6%	4%
46 to 50	1%	<1%
50 and above	3%	1%
Born In Nebraska		
Yes	67%	52%
No	31%	47%
Intent to Leave Nebraska After Graduation		
Yes		32%
No		63%

graduates in the state during the study period.

A total of 1383 questionnaires were mailed: 692 to out-of-state residents and 691 to in-state residents. Of the 1383 questionnaires mailed, 755 usable responses were received, a 54.6 percent response rate. Of the 755 usable responses, 404 were returned by Nebraska college graduates presently living out-of-state. The remaining 351 responses were returned by Nebraska college graduates presently living in Nebraska. The response rate for each Nebraska college and university is shown in Table 1.

Based on the survey results, a demographic profile of Nebraska's college graduates currently living in Nebraska and those residing outside Nebraska is shown in Table 2.

A cautionary note is in order. Information from the 755 usable responses may not be representative of the population of Nebraska alumni living in Nebraska and living out-of-state for two reasons. The sample was limited to those who graduated during the period September 1983 to June 1988. Second, the mailing lists provided by the alumni centers of each college and university may not reflect a random sample of college graduates for the study period. Alumni offices must rely on their graduates to keep records current. Thus, there is room for bias.

Those alumni who respond to their alumni office and keep addresses current may have different attitudes toward Nebraska than those alumni who do not. Those who maintain current addresses with their alumni associations may have closer ties to the state, have more positive attitudes toward Nebraska, and may be less likely to migrate to other states.

Furthermore, these alumni may be more likely to respond to a survey on college graduate migration. In contrast, those originally from out-of-state or with weak ties to Nebraska may never respond to their alumni association. The attitudes and responses reported in this survey are limited to alumni who could be traced.

The demographic profiles given in Table 2 for the Nebraska and out-of-state respondents indicate a substantial similarity in gender, education, and age. A closer examination of these demographic data suggest that income may be a major motivational factor enticing Nebraska's college graduates to leave the state.

Approximately 57 percent of out-of-state residents earn $35,000 or more, compared to only 45 percent for Nebraska residents. Because no major difference exists in the percentages of respondents in each occupational category (not shown in Table 2), an inference can be made that the wage rate for college graduates in Nebraska is lower than in other states. The result is an exodus of grads who perceive that richer careers exist elsewhere.

Another theory on the wage discrepancy is that out-of-state employers are better at enticing the best and brightest Nebraska graduates to work in their states. The wage discrepancy may not be the result of a difference in wages at the same skill level in the same occupations, but a difference in talents between those alumni living in Nebraska and those residing in another state. The difference in talents between alumni may have resulted in the wage discrepancy between Nebraska and out-of-state graduates in this study.

The 1984 NDED report on outmigration trends supported the former wage discrepancy argument, stating that Nebraska had a less competitive, lower paying wage structure in 1980 relative to other parts of the country.

An interesting study, well beyond the scope of this survey, would be a comparison of skills and other quality measures of the migrant workforce. The issue at hand would be whether migrants into Nebraska had better skills and training than outmigrants from Nebraska.

Whether a wage discrepancy or a skill discrepancy exists between college graduates residing in Nebraska and those living in other states is open to debate.

As will be shown in greater detail in later issues of *Business in Nebraska*, other factors may play a part. For example, perhaps Nebraska's college graduates currently living out-of-state would have remained in the state, even with lower relative wages, if greater job opportunities were available in Nebraska.

The 1984 NDED study reported that the highest outmigration rates were among the unemployed with college degrees. The current study found that 63 percent of the out-of-state respondents had no intention of leaving Nebraska after graduation.

Perhaps a lack of sufficient job opportunities in Nebraska and/or better wage offers from out-of-state employers may be forcing college graduates to leave the state. Nebraska may lack certain other amenities relative to other states.

In the next edition, the second part of this series will determine if a difference in attitudes toward Nebraska as a place of residence existed between Nebraska college graduates currently living in the state and those who moved from the state.

We Erred...

In the article on "Evaluating Banks" in last month's issue, we confused some readers with an error at the bottom of page two, the last full paragraph. The second from the last word in the paragraph should read "failed." The error was our own, not that of the authors. We apologize to the authors for creating the error and to our readers for undue confusion.

John S. Austin

Changes in Spending Patterns
1901 to 1987

John S. Austin
Research Associate, Bureau of Business Research, UNL

The pattern of U.S. consumer expenditures since the turn of the century is displayed in the table below based on data supplied by the Bureau of Labor Statistics. The most notable change is the decrease in food and beverage expenditures from 46.4 percent in 1901 to 19.4 percent in 1986-1987. The other major decrease was in the apparel and services component. Taking up the slack have been major advances in expenditures on vehicles, housing, and entertainment.

Unfortunately, these figures don't square with data on expenditures from other sources. The share of expenditures on housing (totalling 32 percent in these data) does not match the 42 percent share found in the CPI base. In addition, the share of health care expenses is suspiciously low and has shown a decrease from the early 1960s. I suspect that medical insurance is buried in another category. Nevertheless, the data are interesting, for they depict general trends.

Consumption Expenditures
of Urban Wage Earner and Clerical Consumer Units
1901 to 1986-1987

Item	1901	1917-19	1934-36	1950	1960-61	1972-73	1986-87
Income Before Taxes[1]	$827	$1,505	$1,518	—	$6,678	$12,771	$27,576
Income After Taxes[1]	—	—	—	$3,923	$5,912	$11,054	$24,986
Average Family Size	5.3	4.9	3.6	3.4	3.2	3.2	2.9
Percent Homeowner	19	27	30	44	56	57	56
Percent of Current Consumption	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Food and Beverages	46.4	41.1	34.7	32.5	26.0	22.6	19.4
Shelter	15.1	13.9	17.7	10.7	13.7	16.4	20.2
Utilities, Fuels, and Public Services	5.6	5.6	7.4	4.3	6.1	6.9	8.2
Household Operations	—	2.7	4.0	3.9	4.2	1.2	1.4
Household Furnishings and Equipment	3.5	4.6	4.1	7.1	5.2	4.8	3.9
Apparel and Services	14.7	17.6	10.9	11.6	10.3	8.4	5.2
Vehicle Expenses	—	1.2	5.9	12.0	13.4	22.9	24.7
Public Transportation	—	1.9	2.6	1.8	1.7	1.2	1.0
Health Care	2.9	4.7	4.0	5.1	6.6	4.7	4.0
Entertainment and Reading	2.7	4.5	5.6	7.1	6.7	7.2	7.3
Personal Care	—	1.0	2.1	2.3	2.9	1.3	1.1
Education	—	.5	.5	.4	1.1	1.1	1.0
Miscellaneous (Sundries)	9.0	2.0	2.5	1.2	4.5	3.3	4.1

[1] Income values are derived from data for complete income reporters—consumer units that provided usable data on household income

Note: Dash indicates data not available

Source: U.S. Bureau of Labor Statistics

Review and Outlook

John S. Austin
Research Associate, Bureau of Business Research, UNL

U.S. Economy

The preliminary Gross National Product (GNP) estimate for the first quarter of 1990 was released in late April. That release showed an increase in real GNP of 2.1 percent at an annual rate. The rate was a full percentage point higher than the fourth quarter 1989's feeble increase of 1.1 percent.

The overall gain was spread across all major components of GNP. Of the $21.7 billion advance in real GNP, the consumption block accounted for $16.4 billion. A reversal from dismal fourth quarter auto sales helped spur the consumption of durable goods to an increase of $16.8 billion—more than accounting for the total rise in real consumption.

Nonresidential and residential investment both showed solid advances. Government spending advanced $5.7 billion, with two-thirds of the government gain coming from the state and local sector. Net exports increased moderately.

Only changes in inventories retarded the gains in real GNP. The rate of accumulation of inventories increased much more slowly than in the fourth quarter. Overall, however, we should view the slowdown in the accumulation of inventory as a healthy sign.

There was some concern that the fourth quarter inventory gains—mostly in automobiles—would cause a slowdown in manufacturing activity. Today's manufacturers put considerable effort into keeping inventories fairly lean. The preliminary release of GNP is subject to several revisions. The revisions can be sizeable.

It is somewhat disappointing that the press made so much of the gains in inflation that were noted with the GNP release. The Implicit Price Deflator (IDP) increased 5.7 percent in the first quarter, versus 3.2 percent in the previous quarter. The increases in inflation in the first quarter were widely known. The Consumer Price Index (CPI) and Producer Price Index (PPI) releases for the first quarter were available well before the release of the IDP. (These three indexes will be discussed in an article in a forthcoming issue.)

The reason for the advance in inflation has been discussed repeatedly. To reiterate—the extreme cold weather of December caused a severe problem in terms of fuel shortages on the East Coast and damaged many of the fruit and vegetable crops in Florida. That resulted in rapid rises in the PPI and CPI in January.

In February, the PPI stabilized, while the CPI continued to rise (based upon increases in apparel prices). In March, the PPI reversed direction and decreased moderately. The CPI continued to advance in March, again reflecting some increases in apparel prices, but also reflecting increases in mortgage rates. There were no surprises in the IDP releases.

The increases in first quarter inflation have relieved some of the pressures upon the Federal Reserve to ease the money supply. Instead, there are some analysts who believe that it is now time for the Fed to tighten the money supply. We may see some minor increases in short-term inter-

Table I
Income and Earnings in Nebraska*
($ Millions)

	First Quarter 1988	Second Quarter 1988	Third Quarter 1988	Fourth Quarter 1988	First Quarter 1989	Second Quarter 1989	Third Quarter 1989	Fourth Quarter 1989	% Change 1989:IV vs Yr Ago
Income									
Total Personal Income	23,371	24,320	23,057	24,055	24,836	24,787	24,312	25,053	4.1
Nonfarm	21,390	21,723	21,966	22,377	22,740	23,088	23,297	23,701	5.9
Farm	1,980	2,598	1,091	1,679	2,096	1,699	1,014	1,352	-19.5
Earnings by Industry**									
Ag. Services, Forestry & Fisheries	151	146	143	145	143	148	156	157	8.3
Mining	52	50	49	46	44	45	45	43	-6.5
Construction	943	919	887	930	901	903	883	914	-1.7
Manufacturing	2,354	2,377	2,407	2,425	2,483	2,492	2,499	2,491	2.7
Nondurable	1,160	1,180	1,196	1,199	1,214	1,245	1,260	1,243	3.7
Durable	1,195	1,197	1,212	1,226	1,269	1,247	1,239	1,249	1.9
TCU***	1,608	1,625	1,627	1,601	1,656	1,650	1,643	1,667	4.1
Wholesale Trade	1,216	1,240	1,269	1,287	1,303	1,322	1,335	1,384	7.5
Retail Trade	1,543	1,583	1,607	1,633	1,666	1,679	1,708	1,732	6.1
FIRE****	1,191	1,206	1,219	1,242	1,238	1,260	1,283	1,329	7.0
Services	3,401	3,520	3,603	3,692	3,787	3,876	3,999	4,118	11.5
Government	3,040	3,068	3,050	3,169	3,212	3,302	3,271	3,306	4.3
Federal, Civilian	473	476	480	492	509	513	522	524	6.5
Military	406	402	401	403	417	415	412	410	1.7
State and Local	2,161	2,190	2,170	2,274	2,286	2,374	2,337	2,373	4.4

* All data are seasonally adjusted at annual rates
** Earnings is the sum of wages and salaries, other labor income, and income earned by sole proprietors
*** Transportation, Communication, Uuilities
**** Finance, Insurance, Real Estate
Source: Bureau of Economic Analysis, U.S. Department of Commerce

est rates over the next several weeks. Long-term rates, as reflected in mortgage rates, already have shown an increase. Some of the increase in long-term rates is related to international pressures to increase long-term interest rates.

The full impact of the rise in mortgage rates has not yet taken its toll on housing markets. While sales of new homes fell 5 percent in March (following a revised 1.5 percent drop in February), the first quarter GNP release shows the first gain in residential investment for several quarters.

The current picture is somewhat mixed, with increased mortgage rates suggesting that housing activity will drop. The drop in the housing area is especially disappointing, as we earlier had reasoned that increased housing activity was the one hope for breaking out of the slow growth syndrome this year.

Personal income continues to increase sharply. In both February and March, personal income was reported to increase 0.8 percent. These two increases also largely were affected by payments to farmers. Subtracting those payments, the increases were 0.6 percent in February and 0.5 percent in March.

Despite the rapid rises in personal income, consumers have been reluctant to expand their spending. In March, personal spending increased only 0.4 percent. There has been a slight increase in the savings rate.

Overall, the economy continues to muddle through 1990. Clear signs of a major change of direction or intensity have yet to emerge.

Nebraska Economy

Personal income by quarter for the state of Nebraska is given in Table I. Personal income in the state increased 4.1 percent in the fourth quarter of 1989 over fourth quarter 1988. That increase is in line with the 4.4 percent increase for full year 1989 versus 1988.

The personal income increase for Nebraska lagged well behind that of the Plains states in general and behind the U.S. as well. The Plains states showed an increase of 6.0 percent, while the U.S. increased 7.6 percent in 1989 over 1988. The major drag on Nebraska personal income was the farm income sector. For the year as a whole, farm income decreased 16.2 percent.

We must view these data with some caution. These are preliminary figures from the Bureau of Economic Analysis in Washington, D.C. For example, we suspect that the construction figure is especially pessimistic. Earnings from construction in Nebraska for 1989 show a decrease of 2.1 percent. Other data sources, such as F. W. Dodge, indicate that Nebraska had a good construction year.

The decrease in the farm income figures appears large. 1988, however, was a good agricultural year for Nebraska. While surrounding states suffered badly from the 1988 drought, Nebraska's total production was near normal levels. That production, combined with higher prices caused by the drought, gave Nebraska a solid increase in farm income that year. The decrease in farm income shown in 1989, thus, is simply a return to more normal farm income numbers.

The data on other Plains states indicate that Nebraska farm income simply fell in line with the Plains region. In Table I-A, data for the percentage changes in total, nonfarm, and farm personal income are given. The drop in Nebraska's farm income of 16.2 percent nearly matches the Plains state drop of 15.0 percent. The farm income data are highly variable. The range of changes shown in Table I-A runs from minus 73.1 percent in Kansas to plus 31.8 percent in Minnesota.

The gain in nonfarm personal income in Nebraska of 6.1 percent is the lowest of all Plains states except North Dakota. That position does not square with the job advances Nebraska experienced in 1989. Unfortunately, when it comes to the personal income data, the Bureau of Business

Table II
Employment in Nebraska

	Revised February 1990	Preliminary March 1990	March % Change vs. Year Ago
Place of Work			
Nonfarm	713,020	717,172	3.0
Manufacturing	95,861	95,527	2.1
Durables	46,848	46,752	1.2
Nondurables	49,013	48,775	2.9
Mining	1,287	1,441	10.1
Construction	22,486	23,325	7.8
TCU*	46,642	46,698	3.7
Trade	182,899	183,778	1.8
Wholesale	54,060	54,465	4.5
Retail	128,839	129,313	1.7
FIRE**	48,331	48,394	1.2
Services	170,594	171,959	3.8
Government	144,920	146,050	3.9
Place of Residence			
Civilian Labor Force	826,790	837,783	4.35
Unemployment Rate	2.8%	2.8%	

* Transportation, Communication, and Utilities
**Finance, Insurance, and Real Estate

Source: Nebraska Department of Labor

Table III
Price Indices

	March 1990	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U* (1982-84 = 100)			
All Items	128.7	5.2	5.2
Commodities	121.1	5.1	5.3
Services	136.9	5.3	5.2
Producer Price Index (1982 = 100)			
Finished Goods	117.0	4.3	5.1
Intermediate Materials	112.4	0.7	1.6
Crude Materials	105.6	2.4	4.6
Ag Prices Received (1977 = 100)			
Nebraska	163	1.2	1.2
Crops	129	-8.5	-9.4
Livestock	184	6.4	6.2
United States	150	0.7	2.2
Crops	128	-5.9	-4.1
Livestock	171	6.2	7.3

U* = All urban consumers
Source: U.S. Bureau of Labor Statistics

Research is in a position of a data taker and not that of a data maker.

Employment in Nebraska in terms of numbers of jobs once again showed a sharp increase in March versus a year ago. Total jobs increased 3.0 percent. The leading sector was a small one, namely mining, showing an increase of 10.1 percent. The mining industry in Nebraska ranges from local sand and gravel operations to oil and gas production.

The next biggest field of activity was construction, with an overall advance of 7.8 percent. Once again, our doubts about the earnings figures on construction are reinforced. Other industries that showed a faster expansion than the state's overall rate were wholesale trade; government services; and transportation, communication, and utilities. The manufacturing sector lagged a bit behind the state, posting an advance in jobs of 2.1 percent.

In 1990, concern continues over moisture conditions that are far from ideal for our state's farmers. Subsoil moisture conditions recently were reported as 89 percent short and 11 percent adequate. Thus, subsoil moisture problems continue. April rains were spotty. Omaha recorded the driest April in 54 years.

Table IV
City Business Indicators
December 1989 Percent Change from Year Ago

The State and Its Trading Centers	Building Activity*
NEBRASKA	13.9
Alliance	-57.6
Beatrice	95.0
Bellevue	28.1
Blair	-74.8
Broken Bow	668.5
Chadron	-28.2
Columbus	-22.5
Fairbury	-4.8
Falls City	45.2
Fremont	31.7
Grand Island	-14.5
Hastings	94.5
Holdrege	354.8
Kearney	88.0
Lexington	109.8
Lincoln	17.6
McCook	153.9
Nebraska City	170.1
Norfolk	46.9
North Platte	3.9
Ogallala	-20.2
Omaha	9.3
Scottsbluff/Gering	109.7
Seward	35.5
Sidney	-52.2
South Sioux City	-41.6
York	24.1

*Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes

Sources: Nebraska Department of Labor and reports from private and public agencies

Table I-A
Plains States Personal Income—Preliminary
(Percentage Change 1988 to 1989)

		Personal Income	
	Total	Nonfarm	Farm
Plains Total	6.0	6.7	-15.0
Iowa	6.1	6.5	-1.5
Kansas	3.5	6.3	-73.1
Minnesota	7.7	7.2	31.8
Missouri	6.7	6.9	-16.5
Nebraska	4.4	6.1	-16.2
North Dakota	2.8	4.5	-33.7
South Dakota	4.1	6.4	-22.3

Source: Bureau of Economic Analysis

Data for Figures I, II, and III and Table V were not available at press time.

Mailing List Update

Business In Nebraska, a publication of the Bureau of Business Research, University of Nebraska-Lincoln, is provided as a public service free of charge. In order for us to maintain an accurate mailing list and to ensure that *Business In Nebraska* is meeting the needs of our subscribers, we ask that you take a moment to complete the following.

1. Do you wish to continue receiving BIN? Yes __ No __

2. Is the information shown on the mailing label correct? Yes __ No __
   If No, please fill in the correct information below.

   ____
   ____
   ____
   ____
   ____

3. What is your title/occupation? ______________________________

4. In what type of business activity does your company engage, or if retired, what are your areas of interest?
   ____

Please detach this page, fold it in thirds, and drop in any mail box. No postage is necessary. (If you wish to return a copy of this form instead of the original, please include a copy of the mailing label on page 12.) If you returned your questionnaire last month, it is unnecessary to complete another. Thank you.

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 355 LINCOLN, NE

POSTAGE WILL BE PAID BY ADDRESSEE

University of Nebraska–Lincoln
The Bureau of Business Research
200 College of Business Administration-0406
LINCOLN NE 68501-9988

Perestroika

(continued from page 4)

might rise. In the long run, the Soviets may become significant competitors of farmers in Nebraska and elsewhere in the U.S.

The Possibility of Backlash in the Nonmarket Economies

Transition to free market policies will require a change in thinking for the persons of the nonmarket economies. Businesses that cannot function efficiently will go bankrupt, something unheard of in centrally planned economies. Layoffs will occur as companies attempt to restructure and produce more efficiently. Reforms will drastically change the way individuals live and work in the nonmarket economies. As citizens in the nonmarket economies come to realize that political emancipation will result not in immediate economic improvements, but in significant hardships with prospects for improvements only in the long run, there may be a backlash. The nonmarket economies generally do not have the established body of law and property rights that protect U.S. business from political turmoil; thus, there may be far more instability in doing business with the nonmarket economies. This uncertainty is compounded by other political problems, such as disputes among ethnic groups. For the most part, socialism has provided the populations of the nonmarket economies with cheap food and full employment. Economic reforms will remove the barrier between the individual and economic hardship—the result may be an outcry for a reversal of reforms. This reverse perestroika would inhibit trade with the U.S.

State Economic Scoreboard

Change from same month one year ago.
See Review and Outlook on page 8 for more details.

	State	Metro+	Nonmetro
Motor Vehicle Sales (January) Constant $	↑ 6.5%	↑ 16.6%	↑ 0.8%
Building Activity (January) Constant $	↑ 10.2%	↑ 9.3%	↑ 11.4%
Employment (March)	↑ 4.9%	↑ 2.9%	↑ 7.0%
Unemployment Rate* (March)	↓ 2.8%	↓ 2.6%	↓ 3.0%

+Omaha and Lincoln. *Unemployment is this month's rate, not a percent change from year ago.

Conclusion

The implementation of perestroika will not occur rapidly; the attitudes of the citizens of the nonmarket economies have been conditioned by guaranteed employment, fixed prices, rationing, graft, and corruption. In order to restructure their economies, the populace of the nonmarket economies must be willing to adapt to the vagaries of a market economy. Before the U.S. becomes overzealous in the pursuit of new trading relations with Eastern Europe, the difficulties in restructuring the nonmarket economies must be considered. In particular, care must be taken to avoid granting extensive trade credit to these countries or otherwise subsidizing inefficient trade. A generation may pass before undistorted international trade provides both the U.S. and the nonmarket economies with mutual benefits that are significant.

For America to benefit from increased trade with the nonmarket economies, the U.S.S.R., China, and Eastern Europe must make their currencies convertible at market exchange rates, liberalize foreign investment, and establish economic institutions necessary for workable competitive markets. Although economic restructuring may improve the potential for trade between the nonmarket economies and areas such as Nebraska, there are many difficulties to be overcome before much growth in Nebraska exports to the nonmarket economies can be expected.

Business
in
Nebraska

PREPARED BY BUREAU OF BUSINESS RESEARCH
Association for University Business & Economic Research

Nonprofit Org.
U. S. Postage
PAID
Lincoln, Nebraska
Permit No. 46

Business in Nebraska is issued as a public service and mailed free of charge upon request to 200 CBA, University of Nebraska-Lincoln, Lincoln, NE 68588-0406. Copyright 1990 by Bureau of Business Research, University of Nebraska-Lincoln. ISSN 0007-683X.

May 1990, Volume 45 No. 548

University of Nebraska-Lincoln-- Martin Massengale, *Chancellor*
College of Business Administration--Gary Schwendiman, *Dean*

Bureau of Business Research
F. Charles Lamphear, *Director*
Merlin W. Erickson, *Research Associate*
Margo Young, *Communications Associate*
John S. Austin, *Research Associate*
Barbara Sumsion, *Composing Technician*
Lisa Darlington, *Secretary*
Carol Boyd, *Secretary*
Dave DeFruiter, *Information Systems Coordinator*

CONGRESSIONAL INFO SERVIC270238
SRI
ER
4520 EAST-WEST HWY
BETHESDA, MD 20814

The University of Nebraska-Lincoln does not discriminate in its academic, admission, or employment programs and abides by all federal regulations pertaining to same.

Business In Nebraska

June 1990
Vol. 45 No. 549

Prepared by the Bureau of Business Research
200 College of Business Administration
University of Nebraska-Lincoln
Lincoln, NE 68588-0406
402/472-2334

Higher Education is Essential to Economic Development

Robert R. Furgason
Vice Chancellor for Academic Affairs
University of Nebraska-Lincoln

Many conferences and programs on economic development focus on monetary factors as means to promote economic development. Certainly, monetary factors are important; they play a vital role in developing future business strategies. Often discounted or overlooked, however, is the human side of economic development and what that side looks like in a supply and demand context. We never should forget that if we do not have the right persons at the right time, all other factors are of little value.

Human capital is the collection of abilities and skills that form the nation's potential labor force. It is difficult to analyze the human capital situation on a micro scale because many of the driving forces, particularly those regarding higher skill jobs, are highly variable.

It is not easy to isolate Nebraska and provide meaningful statistics on various sectors of our work force because local situations are too volatile. Individuals can and do move, job opportunities shift, and industrial activities change rapidly.

This mixture of movements does tell us, however, that we must be aware of national and international perspectives—many local job opportunities respond to national and international trends. Local situations likely will be secondary when it comes to competition for the better trained work force of the future.

In my job, I must be concerned both about whether we can obtain highly qualified faculty and where job opportunities are likely to be for our graduates. We want to produce topnotch graduates, and we want Nebraska to be attractive to our graduates. We know it is important to the business community of this state to have a source of well qualified persons for our work force. I have studied national and international trends and want to share some of my observations and conclusions.

Throughout the world, but particularly in the U. S. and Pacific Rim countries, economic growth during the past decade has been driven largely by commercialization of many technological developments. Computers, electronic consumer goods, sophisticated control mechanisms, automobile advancements, and military weapons are a few examples of how highly technical developments have been at the forefront of new products.

The demand for these products has been a major source of economic growth for countries that have the capacity to in-

State Economic Scoreboard

Change from same month one year ago.
See Review and Outlook on page 8 for more details.

	State	Metro+	Nonmetro
Motor Vehicle Sales (February) Constant $	↑ 6.5%	↑ 9.1%	↑ 4.7%
Nonmotor Vehicle Sales (February) Constant $	↑ 1.6%	↑ 1.3%	↑ 1.9%
Building Activity (February) Constant $	↑ 13.5%	↑ 20.3%	↑ 3.0%
Employment (April)	↑ 4.0%	↑ 2.3%	↑ 5.7%
Unemployment Rate* (April)	↓ 2.4%	↓ 2.4%	↓ 2.4%

+Omaha and Lincoln. *Unemployment is this month's rate, not a percent change from year ago.

vent, develop, manufacture, and market these products.

Obviously, a highly trained manpower base and source of supply are needed in those countries that are engaged in technologically oriented industries. An aggressive cutting-edge research and development effort is essential to be competitive in this environment. The availability of technically trained personnel is crucial to any country that expects its economic development and future to depend on high-tech firms and products.

For more than a decade, the U. S. has relied heavily on foreign born persons in such fields as engineering, computer science, chemistry, physics, and other basic and applied sciences. Even in the field of economics relatively high proportions of the students in U.S. graduate programs in economics are foreign born. This trend is growing in the business schools as well as in the technology fields.

The U.S. has been able to attract many of the best and the brightest of students from other countries, and many of these individuals have chosen to remain in the U.S. after obtaining their advanced degrees.

At the same time, interest in science and technology by U.S. native students has waned. The U.S. has become increasingly more dependent on foreign born individuals to provide the technological manpower for its universities and industries.

The U.S. has been able to attract and retain many foreign born scientists and engineers because of attractive differentials in job opportunities and living standards. As other countries have grown and prospered in their technological industries and commerce, however, many foreign born graduates of U.S. universities are choosing to return to their native countries. This trend obviously has an impact on the source of supply of new, bright, and productive staff members for U.S. organizations.

Our national situation is becoming precarious. The number of high school graduates dropped significantly during the 1980s. The supply impact of the drop in high school age population in the U.S. is an important consideration as we look to overall manpower needs in a technological society. The trend in the number of high school graduates in the U.S. has been down. Nebraska's trend mirrors what has happened nationally, but shows an even steeper decline.

What these trends indicate is that the U.S. and Nebraska populations are aging significantly. In contrast to the downward trends just noted, an upward trend is emerging in terms of job requirements. The interrelation of these two trends suggests a strong likelihood of severe competition for the educated youth of the future.

The statistics and trends related to our youth who are about to become the input to our businesses, industries, and government agencies are particularly disturbing in terms of their ability to provide a properly skilled work force. One of every four ninth graders will not graduate from high school—25 percent of a shrinking number will not have basic high school skills.

Furthermore, the high school dropout rate is increasing. For minorities and the poor, dropout rates are even higher than they are for the general population. A study sponsored by the National Alliance of Business reported that an estimated three of four jobs will require some education or technical training beyond high school. Yet what we witness is an increasing number of high school dropouts.

The U.S. also must attack the lagging scientific knowledge of its school-age population. In a recent study of 17 major countries by the International Association for the Evaluation of Educational Achievement, U.S. secondary school students ranked in the lowest 25 percentile in terms of our students' achievement in science. Tables 1 and 2 show our relative position within this group of countries. (Not all 17 countries are listed.)

Table 1
Rank Order of Countries for Achievement at Each Level

	10 Year Olds Grades 4/5	14 Year Olds Grades 8/9	Grades 12/13 Science Students		
			Biology	Chemistry	Physics
Canada (Eng.)	6	4	11	12	11
England	12	11	2	2	2
Hong Kong	13	16	5	1	1
Japan	1	2	10	4	4
Korea	1	7	-	-	-
Norway	10	9	6	8	6
Philippines	15	17	-	-	-
Singapore	13	14	1	3	5
Sweden	4	6	8	9	10
U.S.A.	**8**	**14**	**13**	**11**	**9**

Source: International Association for Evaluation of Educational Achievement

Table 2
Percentage of Schools Scoring Lower than the Lowest School in the Highest Scoring Country

	10 Year Olds	14 Year Olds	Biology	Chemistry	Physics
Canada (Eng.)	25	6	95	26	93
England	61	19	14	0	18
Hong Kong	77	26	47	0	0
Japan	0	1	84	14	36
Korea	7	5	-	-	-
Norway	58	1	56	4	44
Philippines	83	87	-	-	-
Singapore	75	32	0	0	25
Sweden	3	1	78	11	82
U.S.A.	**38**	**30**	**98**	**48**	**89**

Source: International Association for Evaluation of Educational Achievement

One of the most disturbing factors is that our standing drops as students progress through the grades. Among 17 year olds, 40 percent cannot draw inferences from written materials, and 66 percent cannot solve math problems that involve several steps.

If we are to remain a highly competitive economic power in an increasingly technological world, the U.S. school systems must address this fundamental deficiency. Because the new labor force will increase from 18.5 percent nonwhite in 1985 to a projected 29 percent minority in the year 2000, a major challenge for us is to bring our minority population into the mainstream of scientific endeavors.

As we focus on technical personnel, a major concern involves the presence of adequate faculty to meet anticipated educational needs. The situation regarding the supply of sufficient faculty is alarming.

As mentioned earlier, the U.S. has been dependent on foreign born scientists and engineers to fill technical jobs, both in industry and within the universities. This issue is crucial. Without highly skilled faculty, the graduates of our universities will be at a disadvantage in competing in a global marketplace.

In their landmark book, *American Professor—A National Resource Imperiled*, Bowen and Schuster studied manpower trends for a number of years. Of particular concern are the projections of the numbers of new faculty appointments needed from 1990 to 2010 compared to the anticipated number of qualified persons available to fill these positions.

The number of Ph.D. degrees awarded in the U.S. has been constant over the last two decades, with about 33,000 Ph.D. degrees granted per year. During that time, there was a relatively good balance between total Ph.D. degrees produced and number of faculty appointments made.

During these same two decades, however, some significant shifts were occurring with regard to where Ph.D.s were employed. Business and industry employers were increasing their proportion of the new Ph.D.s dramatically.

This increased proportion was most pronounced in the physical sciences and engineering fields. From 1960-1964, colleges and universities hired 55 percent of the Ph.D.s, and business and industry hired 35 percent. In the 1977-1980 period the proportions reversed, with colleges and universities employing only 34 percent of the Ph.D.s and business and industry employing 53 percent. Business and industry have become attractive employment options for the Ph.D. graduate.

This trend also is occurring in other fields, but not to the same degree as in the physical sciences and engineering. Recent activities in biotechnology are producing similar pressures in the life sciences.

Bowen and Schuster predict the number of faculty appointments needed over the next 10 to 15 years will increase dramatically. The increase is due to several factors.

Our current faculties are aging, and a large number will be retiring during the next two decades. Enrollments in U.S. graduate schools have declined somewhat during the times when faculty jobs were tight; thus, we do not have the potential faculty in the pipeline for replacements. Add to that the competition for Ph.D.s from business and industry noted above.

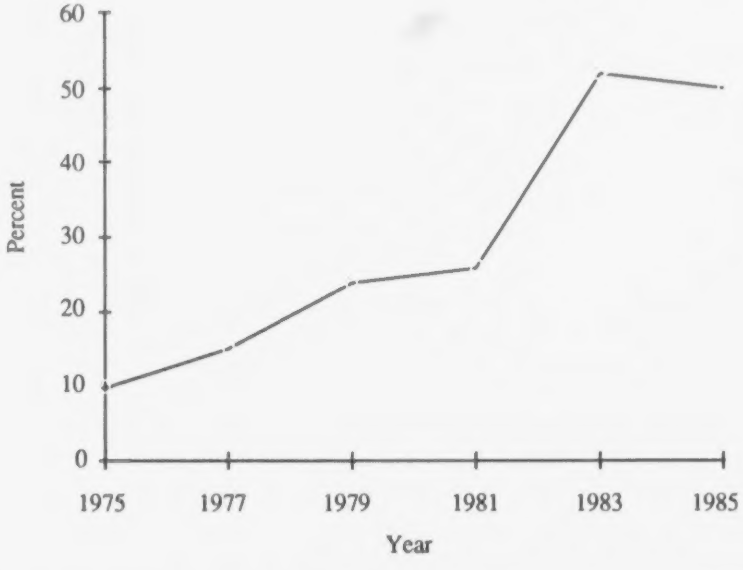
Finally, the number of high school graduates will begin to increase again in the mid-1990s, requiring new faculty jobs just to address that growth. Even though high school graduates dropped significantly during the 1980s, the enrollments in colleges and universities dropped little due to a high proportion of high school graduates going to college and the large entry of older students seeking higher education.

One of the factors that helped the U.S. overcome some of these deficiencies in the past was the immigration of exceptional talent to the U.S. The graduate schools in the U.S. attracted a large number of foreign born students who were eager to study in the U.S. Many successfully sought permanent employment.

In 1975, foreign born students earned 42 percent of the Ph.D.s granted by U.S. engineering schools. By 1985 this proportion had grown to 55 percent. In engineering today, more foreign born Ph.D. candidates are produced than native born candidates.

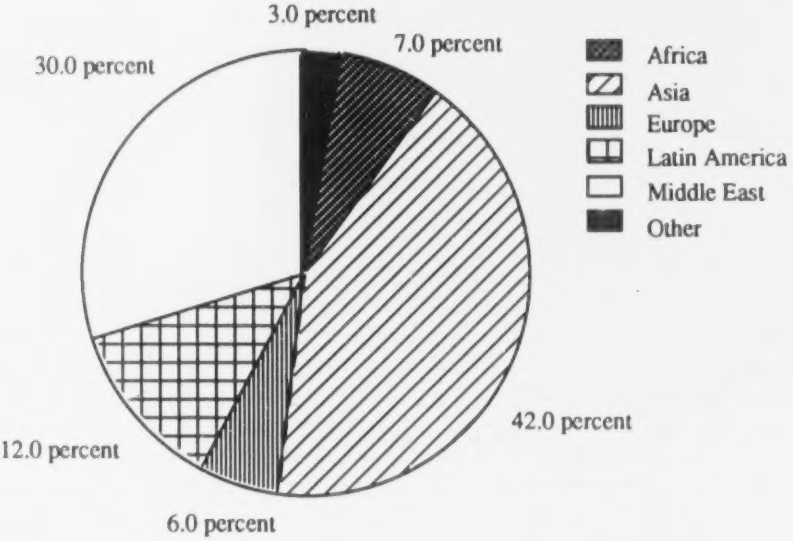
In the past, many of these graduates were hired as new faculty in our engineering schools. Only 10 percent (Figure 1) of all engineering professors age 35 or less

Figure 1
Foreign as Proportion of All Engineering Faculty & Assistant Professors Age 35 or Less For Selected Years, 1975-1985



Source: National Research Council's Survey of Doctorate Recipients

Figure 2
Foreign Engineering Students
By Area of Origin
1983-1984



Source: *Profiles, 1983-1984* (New York: Institute of International Education, 1985)

were foreign born in 1975. This proportion grew rapidly in the next decade. By 1985, over 50 percent of new engineering professors in the field were foreign born.

The U.S. was able to attract talented and gifted students to its universities and work force because of the promise of an excellent education and the potential for well paying jobs. Figure 2 shows the general area of origin for foreign engineering students.

The Pan-Pacific area has been, and continues to be, a large contributor to the U.S. Shifts are beginning to occur, however. As many Pan-Pacific countries have expanded their economies, numerous job opportunities have been created in these countries for their own citizens.

A notable trend is starting where foreign students come to the U.S. for their education and then choose to return to their home countries. An article in the April 18, 1989 edition of the *Wall Street Journal* entitled, "Reverse 'Brain Drain' Helps Asia but Robs U.S. of Scarce Talent" illustrates this trend.

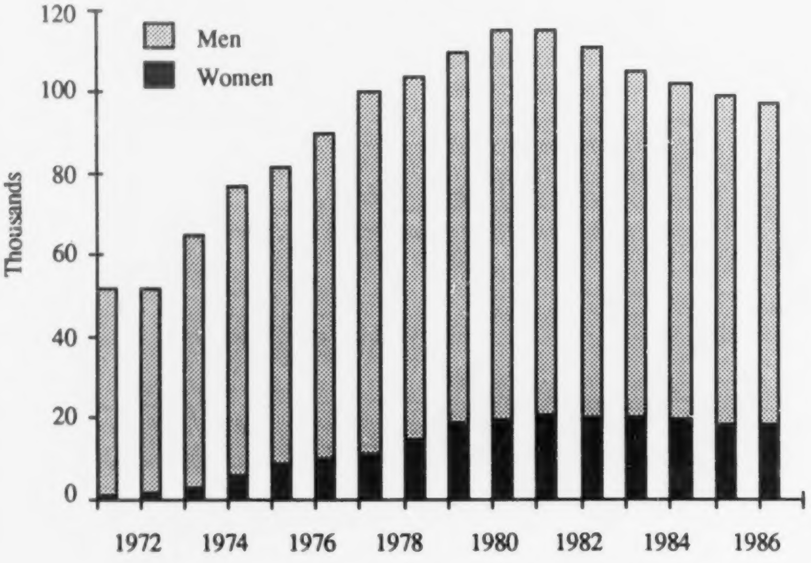
The scramble for skilled and educated talent is spreading. Industrialized nations will be hard pressed to fill the needed positions for their economic development.

A recent article in *Business Week* reported that the Japanese are facing a severe labor shortage—their working age population will drop after 1995. Developing countries will be under intense competition for their own talent, as competition undoubtedly will drive up salary levels—especially for scientists and engineers. Without such talent it will be exceedingly hard for them to develop industries with large value-added elements.

The availability of faculty talent is a key to a sufficient, appropriately educated, and skilled work force. The predicted faculty shortage for the U.S. is mirrored worldwide. Recent articles in the *Chronicle of Higher Education* reflect a growing awareness of the problem. Private companies, too, are expressing fears of a shortage of qualified college graduates for the nonacademic labor market.

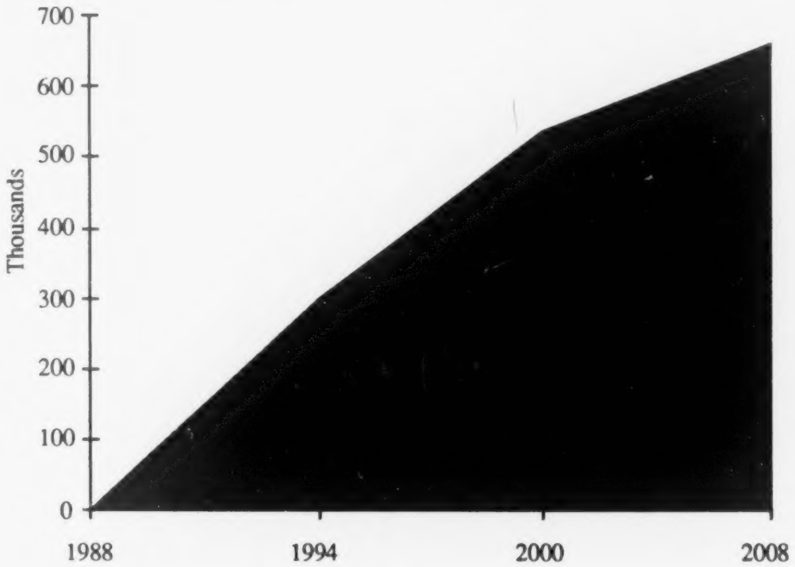
The U.S., in particular, must take dramatic steps to increase the production of highly trained persons, especially in the sciences and in engineering. Our enrollments in engineering nationally are drop-

Figure 3
Freshman Enrollment in Engineering
1972-1987



Source: Betty M. Vettor, *Women in Science; Progress and Problems*

Figure 4
Cumulative Shortfall in Natural Science and Engineering Bachelor's Degrees
(Below the 1984-1986 Production Rate)



Source: NSF

ping (Figure 3). We cannot rely on a ready source of exceptional talent from abroad.

The gap in supply is building as shown in Figure 4. The U.S. National Academy of Sciences recently has urged the U.S. government to double its support for basic research, increase support for fellowships for graduate students in science and engineering, and update academic research facilities. Such investments are crucial to strengthening our scientific and technical capabilities.

In summary, the evidence is conclusive. A global scramble for skilled workers is becoming visible—in all likelihood, this scramble will become increasingly intense. The intensity is particularly notable in the technologically oriented industries.

The U.S. faces a shrinking labor pool for the next decade. The characteristics of this pool indicate that these new workers will be ill-prepared to meet the job requirements needed. Additionally, we will find that the competition for faculty will be intense. Therefore, our businesses and organizations should be alert to their work force needs.

A closing thought from Diogenes, the Greek philosopher, who wrote in about 400 B.C. "The foundation of every state is the education of its youth." These words ring as true today as they did nearly 2400 years ago. The education of our youth is the determining factor for our future. At this point, our youths' education seems to be in jeopardy.

Robert R. Furgason is Vice Chancellor for Academic Affairs and Professor of Chemical Engineering at the University of Nebraska-Lincoln. This article is excerpted from a longer address originally presented at the State of the State Conference session on February 1, 1990. Complete transcripts are available from the Bureau of Business Research.

Check the Date . . . Before It's too Late

The Financial Management Service, U.S. Department of Treasury issued a warning over one year ago to check the date before it's too late. Government checks issued prior to October 1, 1989 must be cashed no later than September 30, 1990.

Government checks issued after October 1, 1989 must be cashed (negotiated) within 12 months from the date of the check. In either case, the check(s) will be cancelled on the deadline.

If you miss the deadline and you are entitled to payment, you then should go to the federal agency that authorized the check.

On August 10, 1987, the President of the United States signed into law Public Law 100-86 (The Competitive Equity Banking Act of 1987). Title X of this law significantly reduces the time for cashing checks, initiating claims, and replacing government checks.

Although the time allowed to cash the check is affected, you do not lose entitlement to payment.

It is a good time to search for any U.S. government checks, such as IRS refunds, Social Security and annuity checks, et cetera, especially those issued prior to October 1, 1989. The U.S. Treasury says that approximately $2 billion worth of nonnegotiated checks are still out there.

Merlin W. Erickson

We're Overwhelmed!

Thanks to all of you who responded to our request to update our mailing list. At last count there were 1,607 responses. We truly were overwhelmed. It will take us a while to make all corrections to our lists, so please be patient.

John S. Austin

Our College Graduates' Decisions Where to Live & Work: Part II

Randy Eck

Graduate Assistant, Bureau of Business Research, UNL

The exodus of college graduates from Nebraska has been a concern for several years. The May issue of *Business in Nebraska* reported that approximately 46 percent of the University of Nebraska-Lincoln's (UNL) graduates between 1971 and 1989 left the state. A 1984 study released by the Nebraska Department of Economic Development (NDED) on migration trends of individuals 20 years or older reported that the highest outmigration rate of persons from Nebraska between 1975 and 1980 was among the unemployed with college degrees. This raises an important question. Why do many of Nebraska's most educated individuals tend to leave the state?

This article reports the results of a recent survey designed to uncover reasons why large numbers of alumni left the state. The survey instrument was a questionnaire mailed to a random sample of individuals who had graduated during the period September 1983 through June 1988 from Nebraska's four year institutions of higher learning.

Equal numbers of out-of-state and in-state alumni were contacted. Of the 1,384 questionnaires that were mailed, 756 usable responses were received, a 54.6 percent overall response rate. Of these, 404 were returned by Nebraska college graduates currently living out-of-state, and 352 were returned by Nebraska college graduates currently living in Nebraska.

The study's research design and the demographic characteristics of the sample were reported in the May issue of Business In Nebraska. Results reported in that issue suggest that college graduates were attracted to higher incomes outside the state. The survey showed that approximately 57 percent of the out-of-state respondents annually earned at least $35,000, compared to only 45 percent for Nebraska respondents.

Perhaps one implication that can be drawn from this finding is that incomes earned from professional jobs in Nebraska are not keeping pace with incomes earned from comparable jobs elsewhere. This implication, however, is tenuous at best. The study did not include a sample of migrants to Nebraska who received their education elsewhere and who chose to begin their professional careers in Nebraska.

A survey of these individuals might indicate that inmigrants who are college graduates of non-Nebraska institutions are satisfied with the state's career opportunities. It is important to keep in mind that the survey conducted by the Bureau was limited, as it only focused on graduates from Nebraska's institutions of higher learning.

Apart from any possible income differential between Nebraska jobs and comparable jobs elsewhere, another thought that has been voiced by some is the possibility that, all other things equal, out-of-state employers are competing better than Nebraska employers for the state's most qualified college graduates. This argument could not be tested on the basis of the survey results. If appropriate data were available to test the argument, however, it is unlikely that the statistical results would support the argument.

The questionnaire used in the Bureau's migration study contained a variety of questions that demographic and migration experts long have stated as reasons why persons move. These factors were incorporated into the questionnaire as attitude measures. Results are given in Table 1.

Thirty-five statements were utilized in the study to determine if significant differences in attitudes exist between Nebraska's college graduates living in-state and out-of-state. Statistically significant differences in opinion were found for 22 of the 35 statements (Table 1).

The presence of an asterisk in the last column of Table 1 indicates that there was a statistically significant difference in attitude between the in-state and the out-of-state groups (at the 0.05 alpha level). Columns one and two report the mean values of responses for in-state residents and out-of-state respondent groups, respectively. The statements were written in a manner so that the lower the mean, the higher the level of agreement with the statement.

The statistical test used to analyze the survey data showed that current Nebraska residents overall appear to have a more positive attitude toward Nebraska as a place to reside and work than do Nebraska college graduates living elsewhere.

Out-of-state respondents revealed a significant negative attitude in response to the question of sufficient job opportunities in Nebraska. These same respondents also revealed a significant negative preference for living in Nebraska even if sufficient job opportunities existed in the state.

One interesting survey finding was the out-of-state resident response to the quality of Nebraska's education system. Out-of-state respondents rated Nebraska's education system higher than the overall rating given by in-state respondents.

In general, the study results reveal that out-of-state residents, when compared to in-state residents, believe that better career and income opportunities exist outside Nebraska, show a greater desire to live in a more scenic state than Nebraska, believe more strongly that Nebraska's climate is not desirable, and place less importance on living close to relatives. Out-of-state respondents also indicated that Nebraska is deficient in offering cultural events and activities.

In contrast, out-of-state respondents when comparing other areas of the country with Nebraska generally agreed that the cost of living in Nebraska is low and that Nebraska is a relatively safe place to live.

Perhaps the most noteworthy finding from the study was the respondents' image of Nebraska. In general, the out-of-state respondents indicated a higher image of Nebraska than did the in-state respondents.

Keep in mind when reviewing the survey and the information contained in Table 1 that the sample omitted college graduates from other states who now reside in Nebraska.

It generally is believed that college graduates of other states move to Nebraska to take advantage of career opportunities and to take advantage of the quality of life in Nebraska. Unfortunately, no statistics exist to support this belief.

One important question remains unanswered—Is Nebraska a net importer or exporter of college graduates? The 1990 census may shed some light on this question. But it will be a long time before that information is processed and published.

Table 1
Differences in Attitudes of Nebraska College Graduates Currently Residing in Nebraska and Those Living Out-of-State Regarding Nebraska as a Place of Residence

Statement	Mean Response Nebraska Residents	Mean Response Out-of-State Residents	Statistically Significant Difference
Nebraska offers sufficient job opportunities in my career area	2.66	3.11	*
I prefer to stay in Nebraska if job opportunities are available	1.99	2.86	*
I plan to continue my education at a Nebraska college, university, or trade school	2.65	3.95	*
I plan to continue my education in another state	3.53	2.72	*
Overall, Nebraska has an excellent educational system	2.15	2.03	-
Nebraska does not offer the recreational pursuits I enjoy	3.34	3.35	-
The only way to get ahead in life is to leave Nebraska	3.93	3.90	-
I would rather live in Nebraska than any other state	2.89	3.42	*
I prefer living in a state that borders Nebraska	3.67	3.36	*
I would like to raise my family in Nebraska	1.97	2.55	*
Nebraska's territory is too flat	3.49	3.42	-
I prefer living in close proximity to the ocean	3.31	3.22	-
The cost of living in Nebraska is too high	3.99	4.23	*
Taxes are too high in Nebraska	2.79	3.58	*
Nebraska is not exciting enough for me	3.48	3.29	*
I prefer living in a rural environment rather than an urban environment	3.08	3.07	-
Close family ties are important me	1.70	1.78	-
I feel safe from crime in Nebraska	2.57	2.14	*
I prefer to live in a different climate than that found in Nebraska	3.06	2.78	*
I desire to live in a more scenic state than Nebraska	3.14	2.88	*
It is important that I live near my family	2.16	2.56	*
The Nebraska park system satisfies my recreational needs	2.60	2.66	-
I can make more money outside Nebraska	2.23	2.03	*
I have traveled extensively in other states	2.32	2.21	-
The Nebraska state government is concerned about my well being	2.94	2.88	-
There are excellent medical facilities in Nebraska	2.03	2.20	*
Nebraska offers a higher quality of life compared to other states	2.26	2.63	*
Nebraska does not have the cultural events and activities I enjoy	3.43	3.21	*
Nebraska meets my entertainment needs	2.47	2.60	-
I enjoy the Nebraska midwestern hospitality	1.81	1.75	-
Nebraska is too conservative	3.13	3.29	*
You are paid what you are worth in Nebraska	3.31	3.33	-
Nebraska needs to diversify from its agricultural base	2.51	2.49	-
Other persons have a poor image of Nebraska	2.03	2.11	-
I have a good image of the State of Nebraska	1.80	1.65	*

The lower the mean responses, the higher the level of agreement with the statement. Statements were scored on a five point scale where 1 = Strongly Agree and 5 = Strongly Disagree
* = Statistically different at the 0.05 alpha level

Review and Outlook

John S. Austin
Research Associate, Bureau of Business Research, UNL

National Economy

The current economic situation can be described correctly as that of a plateau economy. Month-to-month changes in economic activity have been minor. On the whole, a picture of slight positive growth emerges. Many economic indicators are virtually flat.

There has been little change in activity in terms of physical output for a year. The Industrial Production Index has hovered around 108 (1987=100) since April of last year. This year's April figure showed a drop of 0.4 percent, mostly due to cuts in automobile production.

The unemployment rate hit 5.3 percent in April 1989 and has not varied from that figure by more than a tenth of a percent since that time. In May, the unemployment rate returned to 5.3 percent.

Inflation has corrected its run-up of the first quarter and is showing some easing. The Producer Price Index (PPI) has dropped for two months in a row, with the latest figure showing a decrease of 0.3 percent in April.

The rate of change in the Consumer Price Index (CPI) has not dropped as much as that of the PPI, but the rate of advance slowed to 0.2 percent in April. The CPI in April was 4.7 percent higher than its year ago value, while the PPI for April was only 3.5 percent ahead of last year.

At this point, the alarmism we witnessed in the first quarter over the rising tide of inflation has subsided. Fears of an accelerated inflation were unfounded.

The differences in the changes of the CPI and PPI indicate that we are not receiving the full benefit of wholesale energy price reductions at this time.

In particular, gasoline prices have tended to stay where they were before the drop in wholesale prices of recent weeks. Major oil companies claim that dealers and wholesalers are in charge of the ultimate retail prices at the pump. It is anticipated that there will not be a near-term drop in gasoline prices, as the summer driving season is now upon us.

Monetary policy has been on a plateau of sorts as well. The federal funds rate—the interest rate most closely controlled by the Federal Reserve—has remained virtually locked at 8.25 percent since mid-January of this year. Longer-term rates have crept higher. Current mortgage rates are in the 11 percent range, versus the 10 percent range at the start of this year.

An exception to the plateau phenomenon is the construction area, where a decline continues. In April, the value of contracts set a four year low, according to F.W. Dodge.

There are regional aspects to the change in construction spending: the Northeast showed a drop of 27 percent on a year-to-date basis through April, while the South showed a drop of 11 percent. The West was characterized as holding steady, while the North Central region showed an increase of 5 percent.

With the rise in mortgage rates, there is little hope that we will see a major rebound in the residential part of the construction market. Commercial and industrial in-

Per Capita Personal Income Growth in the Metropolitan Areas of the Plains States

Metro Area	Per Capita Income 1988	Growth In Per Capita Income 1983-1988
Bismark, ND	$13,797	16.9%
Cedar Rapids, IA	$16,372	33.6%
Cheyenne, WY	$14,340	15.7%
Colorado Springs, CO	$15,464	29.2%
Columbia, MO	$15,556	39.3%
Davenport, IA-IL	$15,208	30.7%
Denver, CO	$18,155	22.4%
Des Moines, IA	$17,156	31.2%
Dubuque, IA	$13,500	32.7%
Duluth, MN-WI	$13,253	31.3%
Fargo, ND-MN	$14,219	22.7%
Fort Collins-Loveland, CO	$14,839	28.8%
Iowa City, IA	$16,561	37.8%
Joplin, MO	$12,548	32.2%
Kansas City, MO-KS	$17,078	32.1%
Lawrence, KS	$12,980	31.1%
Lincoln, NE	$15,078	28.4%
Minneapolis-St. Paul, MN	$19,371	37.7%
Omaha, NE-IA	$15,873	28.9%
Rapid City, SD	$13,176	20.9%
St. Joseph, MO	$14,080	29.3%
St. Louis, MO-IL	$17,806	35.4%
Sioux City, IA-NE	$14,341	28.5%
Sioux Falls, SD	$15,285	27.9%
Springfield, MO	$14,400	32.1%
Topeka, KS	$16,824	26.6%
Waterloo-Cedar Falls, IA	$14,181	27.4%
Wichita, KS	$16,467	25.6%
UNITED STATES	$16,490	36.3%

Source: U.S. Bureau of Economic Analysis

vestment are concentrated in equipment purchases rather than in structures.

There is ample room for public investment in the nation's infrastructure, but a major effort is still in the debate stage. It is probable that major spending will begin only after the federal budget deficit problem is resolved.

Our characterization of the economy as a plateau economy is supported by recent forecasts released by the National Association of Business Economists. Their forecast is that the economy will expand 2.0 percent in 1990. That forecast matches our expectations. Their forecast for 1991 calls for Gross National Product (GNP) growth of a moderate 2.4 percent.

The picture that emerges shows little or no increase in the goods-producing area, a decrease in construction sector, a return to 4.5 to 5.0 percent inflation, and a steady monetary policy. With goods production virtually flat and construction sliding, the economy will have to rely on the services sector to provide an overall economic advance. The term plateau is justified.

Recent data show the extent of the influence of the automobile industry on our economy. The weakness in the fourth quarter was due to a severe drop in auto sales. That drop in turn led to a substantially weak GNP.

First quarter auto sales rebounded from fourth quarter levels. GNP showed a small recovery. But in April and May, automobile sales were below year previous levels. Second quarter GNP growth may be limited by slack automobile sales.

Leaks of a major producer's plans to offer extensive rebates at the end of the model year may chill summer automobile sales. Consumers simply may postpone their purchases of 1990 models until clearance time comes.

The drop of industrial production that we mentioned for April also was ascribed to the auto industry's cutbacks in production. Last, auto sales and auto inventory changes have influenced the GNP figures strongly in the last two quarters.

Overall, growth in GNP for the first quarter indicated a deceptively slow growth in the economy. To understand what is going on, we need to take a quick look at some basics of GNP accounting.

GNP first is announced at the end of the month following the end of a quarter. That

Table I
National Indicators

	Annual		Quarterly (SAAR)			
	1988	1989	1989:II	1989:III	1989:IV	1990:I
Real GNP (percent change)	4.4	3.0	2.5	3.0	1.1	1.3
Real Consumption (percent change)	3.4	2.7	1.9	5.6	0.5	2.4
Housing Starts (millions)	1.5	1.3	1.4	1.3	1.3	1.4
Auto Sales (millions)	10.6	9.9	10.3	10.8	8.7	9.7
Interest Rate (90 day T-bill)	6.7	8.1	8.4	7.8	7.6	7.8
Unemployment Rate (percentage)	5.5	5.3	5.3	5.3	5.3	5.3
Industrial Production Index (1987=100)	105.4	108.1	108.4	108.1	108.1	108.0
Money Supply, M2 (percent change)	5.1	4.9	1.6	6.9	7.0	6.2

NOTE: SAAR—Seasonally Adjusted at Annual Rates
Source: Bureau of Economic Analysis

Table II
Employment in Nebraska

	Revised March 1990	Preliminary April 1990	April % Change vs. Year Ago
Place of Work			
Nonfarm	716,395	722,868	2.5
Manufacturing	95,446	95,775	1.9
Durables	46,725	46,891	1.3
Nondurables	48,721	48,884	2.5
Mining	1,441	1,642	7.1
Construction	23,231	25,091	4.3
TCU*	46,323	46,478	2.1
Trade	183,779	185,913	1.2
Wholesale	54,218	55,205	2.9
Retail	129,561	130,708	0.5
FIRE**	48,376	48,477	0.4
Services	172,230	173,910	4.1
Government	145,569	145,582	2.9
Place of Residence			
Civilian Labor Force	837,513	837,821	3.45
Unemployment Rate	2.8%	2.4%	

*Transportation, Communication, and Utilities
**Finance, Insurance, and Real Estate

Source: Nebraska Department of Labor

Table III
Price Indices

	April 1990	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U* (1982-84 = 100)			
All Items	128.9	4.7	5.1
Commodities	121.4	4.0	5.0
Services	137.1	5.3	5.2
Producer Price Index (1982 = 100)			
Finished Goods	117.0	3.5	4.7
Intermediate Materials	112.8	0.4	1.3
Crude Materials	102.6	-1.4	3.1
Ag Prices Received (1977 = 100)			
Nebraska	166	4.4	2.0
Crops	132	-6.4	-8.7
Livestock	188	10.6	7.2
United States	151	2.7	2.4
Crops	132	-5.7	-4.5
Livestock	169	9.7	7.9

U* = All urban consumers
Sources: U.S. Bureau of Labor Statistics and the Nebraska Department of Agriculture

advance report is subject to substantial revisions. Major components of the revisions tend to be in two areas: changes in inventories and net exports. In both cases, only fragmentary data are available at the time the initial report on GNP is made.

For the first quarter of this year, the first revision of GNP lowered the initially reported growth rate from 2.1 percent to 1.3 percent. A large part of that revision was due to a change in the inventories data.

The inventory component of GNP is technical. The total change in the gain of inventory accumulation adds to GNP growth. In the fourth quarter of 1989, $22.2 billion worth of GNP was due to an accumulation of business inventories. In the first quarter of 1990, the accumulation decreased $5.9 billion.

Consequently, the total change from the fourth quarter to the first quarter in inventory accumulation was a minus $28.1 billion. That figure is more than double the total increase in GNP for the quarter. Interestingly enough, the total change in automobile inventory accumulations alone more than exceeded the total $28.1 billion total recorded. That change in accumulation was due to an increase in auto sales.

On the whole, the change in inventories must be viewed as healthy, as inventories were too large in the fourth quarter.

Perhaps a better way to look at the data would be to look at the final sales figure, a figure that omits the inventory adjustment. In the first quarter of 1990, real final sales increased 4.1 percent, a rate that is quite acceptable. Final sales in the fourth quarter 1989, advanced only 1.1 percent, an amount matching the total gain in GNP.

Thus, stripping away the impact of the inventory adjustment to the GNP figures tends to make us feel somewhat better about the advance of the economy in the first quarter of this year and provides a positive exception to the plateau economy characterization.

Nebraska Economy

Perhaps the biggest story to impact Nebraska is in agriculture. Rains throughout the spring have begun to correct the subsoil moisture shortages. The most recent reports indicate that we are 37 percent short, as compared to the 95 percent short figures we saw at the end of last year.

Certainly there are differences across the state and, in fact, there are recent an-

Table IV
City Business Indicators
February 1990 Percent Change from Year Ago

The State and Its Trading Centers	Employment (1)	Building Activity (2)
NEBRASKA	4.4	18.5
Alliance	2.5	-60.3
Beatrice	1.5	111.9
Bellevue	2.2	36.8
Blair	2.2	-88.1
Broken Bow	3.2	-90.0
Chadron	7.3	-19.5
Columbus	6.5	-21.1
Fairbury	2.5	14.9
Falls City	8.8	-0.8
Fremont	8.1	5.1
Grand Island	5.3	-8.3
Hastings	5.5	111.2
Holdrege	2.1	222.6
Kearney	4.7	71.8
Lexington	7.9	62.3
Lincoln	3.6	16.7
McCook	0.9	178.9
Nebraska City	-2.1	247.4
Norfolk	9.7	57.9
North Platte	9.5	11.9
Ogallala	7.7	-15.9
Omaha	2.2	30.3
Scottsbluff/Gering	1.2	324.7
Seward	6.4	78.0
Sidney	4.0	-46.3
South Sioux City	3.2	-59.6
York	9.8	-5.9

(1)As a proxy for city employment, total employment (labor force basis) for the county in which a city is located is used

(2)Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes

Sources: Nebraska Department of Labor and reports from private and public agencies

Figure I
City Business Index
February 1990 Percent Change from Year Ago

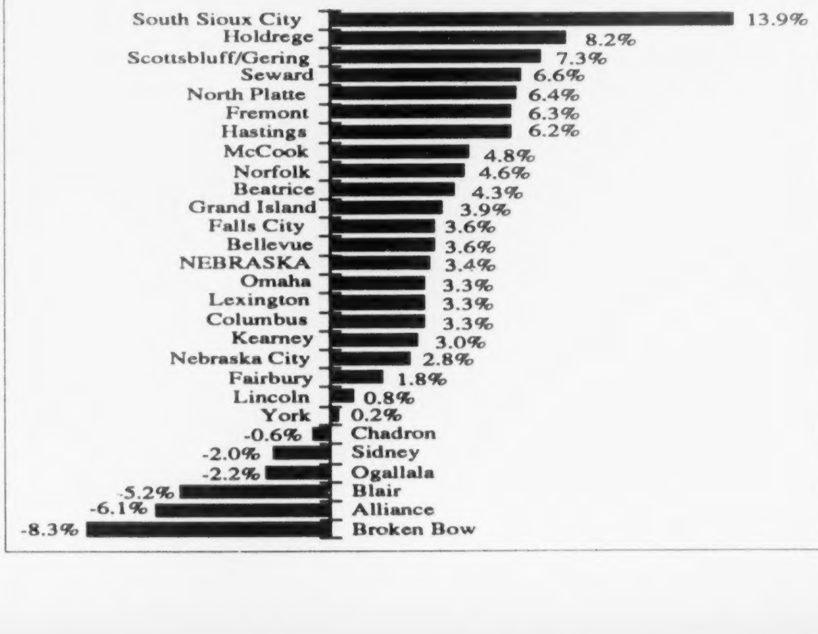


Table V
Net Taxable Retail Sales of Nebraska Regions and Cities

Region Number and City (1)	City Sales (2) February 1990 (000s)	City Sales (2) % Change vs. Year Ago	Region Sales (2) February 1990 (000s)	Region Sales (2) % Change vs. Year Ago	YTD % Change vs. Year Ago
NEBRASKA	$758,064	7.0	$866,760	7.6	10.1
1 Omaha	273,883	8.1	334,773	9.2	11.9
Bellevue	10,713	8.0	*	*	*
Blair	4,364	15.3	*	*	*
2 Lincoln	95,364	1.9	110,205	2.9	7.0
3 South Sioux City	5,405	45.6	6,905	32.9	31.0
4 Nebraska City	3,162	0	15,251	6.3	8.6
6 Fremont	14,067	11.3	25,655	11.6	12.2
West Point	2,532	15.2	*	*	*
7 Falls City	1,661	4.9	7,536	3.7	7.0
8 Seward	3,588	7.9	12,162	4.0	10.4
9 York	5,082	-3.6	12,667	1.3	0.1
10 Columbus	13,314	9.2	24,273	7.4	9.2
11 Norfolk	15,494	1.0	29,116	2.9	4.2
Wayne	2,386	0.3	*	*	*
12 Grand Island	30,159	10.2	42,339	9.7	7.7
13 Hastings	13,675	5.9	21,783	3.4	-1.4
14 Beatrice	6,728	5.7	15,403	6.0	11.2
Fairbury	2,298	5.6	*	*	*
15 Kearney	16,009	1.5	22,698	2.7	-1.1
16 Lexington	5,259	-0.6	14,186	4.4	2.3
17 Holdrege	3,809	9.3	6,773	4.4	5.8
18 North Platte	12,895	9.4	16,736	11.9	12.2
19 Ogallala	4,348	-5.8	10,354	1.8	-1.6
20 McCook	6,455	4.1	8,854	-0.6	-0.8
21 Sidney	3,272	3.7	6,829	6.1	1.6
Kimball	1,490	8.2	*	*	*
22 Scottsbluff/Gering	14,921	5.1	21,756	7.5	4.0
23 Alliance	4,494	-1.0	11,340	-0.4	2.9
Chadron	2,196	-1.1	*	*	*
24 O'Neill	3,431	9.9	11,508	7.8	3.6
Valentine	2,017	6.0	*	*	*
25 Hartington	1,236	10.7	6,845	2.4	2.2
26 Broken Bow	3,001	8.7	10,140	7.9	4.9

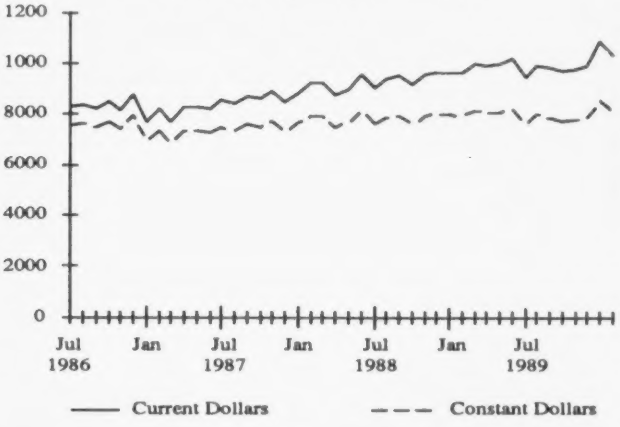
(1) See region map

(2) Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales

* Within an already designated region

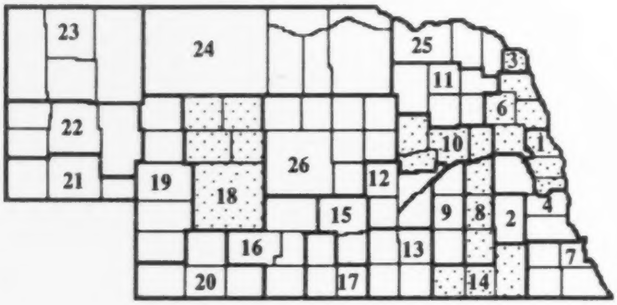
Compiled from data provided by the Nebraska Department of Revenue

Figure II
Nebraska Net Taxable Retail Sales (Seasonally Adjusted, $ Millions)



(1) The Consumer Price Index (1982-84 = 100) is used to deflate current dollars into constant dollars

Figure III
Region Sales Pattern
YTD as Percent Change from Year Ago



Shaded areas are those with sales gains above the state average. See Table V for corresponding regions and cities

nouncements of dangerous rangeland fire conditions in parts of the state. But all crop reporting regions indicate that they have received at least 80 percent of normal rainfall from April 1 through May 25. Thus, it looks as if Nebraska may have broken out of its two year string of drought conditions.

The USDA recently released a forecast for the national winter wheat crop. That crop is now forecast to be 44 percent ahead of last year's weather damaged levels. The corn crop is forecast to be 8 percent ahead of last year's levels.

The unemployment rate in Nebraska in April was a remarkably low 2.4 percent. That figure is less than half the U.S. level. The unemployment rate was shared by both the metro and nonmetro areas of the state. Nebraska continues to have one of the lowest unemployment rates in the nation.

Retail sales recently passed the high points set in May and June 1989 (Figure 2). February net taxable retail sales levels advanced 7.6 percent ahead of year ago figures (Table V).

Nebraska's construction activity continues to run counter to that of the nation. According to F.W. Dodge, year-to-date residential square footage contracts through April were running 31.0 percent ahead of last year, while nonresidential building square footage was running 45.6 percent ahead of last year.

The total value of construction contracts through April ran 47.0 percent ahead of last year. Although gains were virtually across the board, the bulk of the increase in the value of construction came from nonbuilding construction and commercial construction. According to Dodge, 1989 was a good year for construction in Nebraska—therefore, it appears that 1990 will be an extraordinary year for Nebraska construction.

Nebraska Data Users

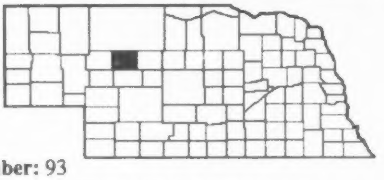
Because some of our data were not available at press time, we were forced to suspend printing of all or parts of several tables in last month's issue. Fortunately, we are back to a full set of tables this month. If you want to see any of the missing tables for last month, please write us. Our address is at the top of page one.

John S. Austin

County of the Month

Hooker

Mullen--County Seat



License plate prefix number: 93

Size of county: 723 square miles, ranks 33rd in the state

Population: 1,000 (estimated) in 1988, a change of +2.8 percent from 1980

Median age: 36.5 years in Hooker County, 29.7 years in Nebraska in 1980

Per capita personal income: $10, 852 in 1988, ranks 91st in the state

Net taxable retail sales ($000): $3,245 in 1989, a change of -0.1 percent from 1988

Number of business and service establishments: 25 in 1987; 76 percent had less than five employees

Unemployment rate: 2.6 percent in Hooker County, 3.1 percent in Nebraska for 1989

Nonfarm employment (1989):

	State	**Hooker County**
Wage & salary workers	705,672	220
	(percent of total)	
Manufacturing	13.4%	*
Construction and Mining	3.6	*
TCU	6.5	4.1%
Retail Trade	18.5	21.4
Wholesale Trade	7.6	1.4
FIRE	6.8	*
Services	23.7	*
Government	19.9	39.5
Total	100.0%	100.0%

Agriculture:

Number of farms: 78 in 1987, 59 in 1982

Average farm size: 4,273 acres in 1987

Market value of farm products sold: $5.6 million in 1987 ($72,041 average per farm)

Sources: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, Nebraska Department of Labor, Nebraska Department of Revenue

*Data not available due to federal disclosure law suppression

Merlin W. Erickson

Business in Nebraska
PREPARED BY BUREAU OF BUSINESS RESEARCH
Association for University Business & Economic Research

Business in Nebraska is issued as a public service and mailed free of charge upon request to 200 CBA, University of Nebraska-Lincoln, Lincoln, NE 68588-0406. Copyright 1990 by Bureau of Business Research, University of Nebraska-Lincoln. ISSN 0007-683X.

June 1990, Volume 45 No. 549

University of Nebraska-Lincoln-- Martin Massengale, *Chancellor*
College of Business Administration--Gary Schwendiman, *Dean*

Bureau of Business Research
F. Charles Lamphear, *Director*
Merlin W. Erickson, *Research Associate*
Margo Young, *Communications Associate*
John S. Austin, *Research Associate*
Barbara Sumsion, *Composing Technician*
Lisa Darlington, *Secretary*
Carol Boyd, *Secretary*
Dave DeFruiter, *Information Systems Coordinator*

The University of Nebraska-Lincoln does not discriminate in its academic, admission, or employment programs and abides by all federal regulations pertaining to same.

Nonprofit Org.
U. S. Postage
PAID
Lincoln, Nebraska
Permit No. 46

CONGRESSIONAL INFO SERVIC270238
SRI 3R
4520 EAST-WEST HWY
BETHESDA, MD 20814

J U7860-1

Business In Nebraska

July 1990
Vol. 45 No. 550

Prepared by the Bureau of Business Research
200 College of Business Administration
University of Nebraska-Lincoln
Lincoln, NE 68588-0406
402/472-2334

BEA Projections for the U.S., Plains, and Nebraska

John S. Austin, Research Associate
UNL Bureau of Business Research

Regional and state projections of income, employment, and population recently were released by the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) for 1988 through 2000. This article reports and examines BEA's projection for Nebraska. These projections are based on BEA's top-down method of allocating national projections to generate regional and state figures.

Major differences exist between top-down projections and region- or state-based projections. Are top-down projections more or less reliable than region- or state-based projections? This exercise begins with BEA's national projections.

Overall, BEA's national projections of population, employment, and income for 1988 through 2000 are in line with comparable projections by other major forecasting groups, such as the WEFA Group and Data Resources, Inc.

For example, BEA's projection of a 0.7 percent average annual population growth rate compares favorably with a rate just under 1.0 percent reported by WEFA and Data Resources, Inc. BEA projects national employment for the period to increase, on average, 1.1 percent per year. The two forecasting groups show slightly higher rates. Finally, BEA's projected average annual growth rate for the nation's personal income of 1.96 percent is bracketed by the rates reported by the two forecasting groups.

Thus, BEA's national projections of population, employment, and personal income appear realistic.

BEA expects a general slowdown in population and economic growth for the nation (Tables 1 and 2). The projected slowdown is shared by many other forecasters, such as the two forecasting groups cited earlier. The nation's population grew at an average annual rate of 1.01 percent from 1979 through 1988 (Table 1). BEA expects that rate to drop to 0.71 percent from 1988 though 2000.

In addition, BEA expects the national growth rate for real personal income to drop 0.6 percentage points. Further, BEA predicts that the nation's growth in employment will decrease 0.80 percentage points from the 1979 through 1988 pace to a rate of 1.12 percent from 1988 though 2000 (Table 2).

BEA's projections of population and total personal income can be combined to derive a projection of per capita personal income. Per capita income is given in Table 1.

From 1979 though 1988, the nation's per capita personal income grew at an average annual rate of 1.58 percent. BEA expects the per capita personal income growth rate for the nation to drop, on average, to 1.23 percent for the remainder of this century.

State Economic Scoreboard

Change from same month one year ago.
See Review and Outlook on page 8 for more details.

	State	Metro+	Nonmetro
Motor Vehicle Sales (March) Constant $	↓ -6.7%	↓ -5.9%	↓ -7.3%
Nonmotor Vehicle Sales (March) Constant $	↑ 0.3%	↓ -0.6%	↑ 1.2%
Building Activity (March) Constant $	↑ 74.4%	↑ 17.2%	↑ 159.1%
Employment (May)	↑ 5.5%	↑ 4.0%	↑ 6.9%
Unemployment Rate* (May)	↓ 2.0%	↓ 2.0%	↓ 2.0%

+Omaha and Lincoln. *Unemployment is this month's rate, not a percent change from year ago.

Table 1
Income and Population in the U.S. and Plains States

	Total Real Personal Income				Population				Real Per Capita Personal Income					
	$ Millions (1982 $)		Annual Growth Rate (%)		Thousands		Annual Growth Rate (%)		(1982 $)		Annual Growth Rate (%)		% of U.S.	
Area	1988	2000	1979-1988	1988-2000	1988	2000	1979-1988	1988-2000	1988	2000	1979-1988	1988-2000	1988	2000
U.S.	3,255,648	4,108,386	2.56	1.96	245,807	267,741	1.01	0.71	13,245	15,345	1.53	1.23	100	100
Plains	219,538	274,131	1.32	1.87	17,759	18,825	0.42	0.49	12,362	14,562	0.89	1.37	93	95
Nebraska	19,037	24,149	0.80	2.00	1,602	1,686	0.27	0.43	11,882	14,322	0.54	1.57	90	93
Iowa	33,374	41,283	-0.18	1.79	2,834	2,981	-0.32	0.42	11,777	13,849	0.14	1.36	89	90
Kansas	31,550	39,256	1.39	1.84	2,495	2,620	0.68	0.41	12,645	14,986	0.70	1.43	95	98
Minnesota	57,611	72,217	2.13	1.90	4,307	4,657	0.72	0.65	13,378	15,508	1.41	1.24	101	101
Missouri	63,822	79,287	1.90	1.82	5,141	5,434	0.56	0.46	12,414	14,592	1.33	1.36	94	95
North Dakota	6,840	8,703	-0.24	2.03	667	698	0.25	0.38	10,254	12,461	-0.49	1.64	77	81
South Dakota	7,304	9,237	0.31	1.97	713	749	0.38	0.41	10,244	12,330	-0.07	1.56	77	80

A convergence pattern is reflected in BEA's regional projections. The convergence is apparent in its per capita personal income projections. The New England region experienced an impressive 3.4 percent average annual growth rate in per capita personal income from 1979 through 1988. BEA projects that New England's per capita personal income will drop to an average annual rate slightly under 1.0 percent from 1988 through 2000.

For the Mideast, BEA projects a similar reduction from just under 2.5 percent per year to 1.15 percent per year. BEA's projections for the Southeast show a 0.5 percent reduction in that region's per capita personal income growth rate.

Gains from convergence are in the middle parts of the country. BEA expects the Great Lakes to experience an increase in per capita personal income from an average just under 1.0 percent per year from 1979 through 1988 to an average of 1.23 percent per year from 1988 through 2000. BEA projects a similar performance for the Plains, an increase from 0.89 percent per year to 1.77 percent per year.

BEA has the Southwest and Rocky Mountain regions both experiencing a healthy recovery from the energy-based slump of the 1980s. BEA expects these two regions will experience growth rates nearly triple their miserly 0.5 percent per year growth rate from 1979 though 1988.

Finally, BEA expects virtually no change in the average annual per capita income growth rate for the West. That rate is predicted to be 1.1 percent per year for the duration of the century.

In short, regional per capital personal income growth rates from 1979 though 1988 ranged from New England's high of 3.4 percent to a low of 0.5 percent for the Southwest and Rocky Mountain regions, a spread of 2.9 percentage points. In contrast, BEA's regional projections from 1988 through 2000 indicate that the spread will be cut to 0.55 percentage points. Regional convergence clearly is a part of BEA's top-down projections, at least for per capita personal income growth rates.

The regional convergence pattern also is evident in projections for Nebraska. BEA's projection of per capita personal income for Nebraska shows nearly a quadrupling of the state's per capita personal income growth rate of 0.4 percent from 1979 through 1988 to 1.57 percent from 1988 through 2000.

Per capita personal income is total personal income divided by total population. According to BEA's projections, Nebraska's real personal income will grow 26.9 percent between 1988 and 2000. While that growth rate matches the nation's growth rate, Nebraska's per capita real personal income is expected to increase 20.5 percent, 4.6 percentage points above the expected national rate.

What implicit explanation or assumption lies behind BEA's projections to produce such an impressive projected growth rate for Nebraska's per capita personal income? To answer this query, we need to track the projection of the components of personal income.

National growth in employment is projected to decrease 0.80 percentage points to 1.12 percent for the years 1988 to 2000 (Table 2). (Nebraska's growth follows Plains' growth so closely that the Plains figures were omitted from Table 2.) Nebraska's growth in employment is expected to increase slightly from 0.8 percent to 0.88 percent. That low rate of increase is not causing the differences in personal income growth.

Earnings are a major part of personal income. Earnings include wages, salaries, benefits, and proprietors income. Earnings and employment data for the U.S. are displayed in Table 3. It is in these data where we see dramatic increases in the Nebraska outlook.

Little change in total earnings is expected at the U.S. level. The growth rate is expected to be 1.94 percent from 1988 through 2000. That earnings growth rate versus the employment growth rate of 1.12 percent implies an earnings-employment differential of 0.8 percent per year. That differential can arise from changes in hours worked, benefits, and(or) proprietors income as well as from changes in wage rates.

The earnings-employment differential for Nebraska is shown in Table 3. The change from -0.51 percent to +0.85 percent is a total change of 1.36 percent per year—a sharp contrast to the 0.7 percent increase for the U.S.

Table 3
Earnings, Employment, and the Earnings-Employment Differential

	U.S. 1979/1988	U.S. 1988/2000	Nebraska 1979/1988	Nebraska 1988/2000
(1) Earnings Annual Growth (%)	2.02	1.94	0.29	1.73
(2) Employment Annual Growth (%)	1.92	1.12	0.80	0.88
(3) Earnings-Employment Differential (%) [(3) = (1) - (2)]	0.10	0.80	-0.51	0.85
Gain in the Differential	0.70		1.36	

That reversal of the differential for Nebraska may be unrealistic, especially in light of the tendency for much of Nebraska's job growth to be concentrated in service employment. Many of these jobs are part time.

For example, in 1988 Nebraska's average hours worked in manufacturing were 40.5. In the main services category, it was 31.7 hours per week, on average. Within the main services category, amusement and recreation were 25.8 hours per week and membership services were 24.5 hours per week, on average.

Mixing part-time jobs with full-time jobs reduces total wages paid per job. That is reflected as a reduction in the earnings-employment differential. In addition, wages in the main services category are well below the manufacturing counterpart. In 1988, for example, Nebraska's average hourly earnings rate in manufacturing was $9.49. That average wage rate contrasts to an average hourly earnings in services of $6.85.

Thus, the Nebraska economy's shift toward more service-oriented jobs has a double effect on the earnings-employment differential: a lowering of the average work week and a lowering of the average hourly earnings.

The total gain in Nebraska's earnings of 1.73 percent over the next decade is still less than the gain of total personal income of 2.0 percent per year. The Nebraska figures for earnings and personal income contrast with the U.S. figures. U.S. earnings and personal income growth rates are nearly identical.

This suggests that nonearnings items in the Nebraska personal income figures are increasing more rapidly than their national counterparts. Nonearnings items include interest income and transfer payments. Transfer payments reflect social payments, such as Social Security income.

Given the data available at the time of this writing, we are unable to explain the gap between earnings and personal income in BEA's top-down projections for Nebraska.

The top-down approach forces state and regional projections to add to a national total. There are substantial differences of opinion on how to handle any residual differences that may arise between the total of the initial distribution process and the requirement that final forecasts for states and regions add to the U.S. total.

Region- and state-based projections do not impose the requirement that state data add to national totals. The latter method allows forecasters to state their perceptions of the most likely outcome for the states or regions analyzed without regard to whether they fit into a national forecasting system. The issue at hand is whether the constraint of being forced to U.S. totals improves or damages regional forecasts.

Table 2
Employment by Industry--Nebraska and the United States

	Nebraska Thousands of Jobs 1988	Nebraska Thousands of Jobs 2000	Nebraska Annual Growth Rate (%) 1979-1988	Nebraska Annual Growth Rate (%) 1988-2000	United States Annual Growth Rate (%) 1979-1988	United States Annual Growth Rate (%) 1988-2000
Total Employment	933	1,036	0.80	0.88	1.92	1.12
Farm	74	69	-2.13	-0.55	-1.78	-0.63
Nonfarm	859	967	1.10	1.00	2.04	1.16
Private	703	806	1.24	1.15	2.23	1.29
Ag Service	9	12	3.55	2.54	5.21	2.74
Mining	3	3	1.16	0.03	-1.24	-0.25
Construction	41	44	-1.31	0.55	2.06	0.76
Manufacturing	100	107	-0.22	0.60	-.83	0.27
Durable	48	50	-1.34	0.40	-1.14	0.20
Nondurable	52	57	0.93	0.78	-.35	0.38
TCU*	52	56	-0.34	0.58	1.34	1.04
Wholesale Trade	52	56	0.39	0.61	1.47	0.95
Retail Trade	154	173	0.74	0.97	2.40	1.24
FIRE**	70	78	2.23	0.92	3.56	1.13
Services	222	277	3.27	1.88	4.41	2.08
Government	156	161	0.46	0.25	1.04	0.43
Federal Civilian	18	18	0.77	0.08	0.80	0.12
Federal Military	21	21	0.34	0	1.49	-0.04
State & Local	118	122	0.44	0.32	1.01	0.59

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (May 1990), pp. 33-54

* TCU-Transportation, communication, and utilities

** FIRE - Finance, insurance, and real estate

Price Indexes

John S. Austin, Research Associate
UNL Bureau of Business Research

Rapid increases in inflation earlier this year have called attention to price indexes and their use in measuring inflation. Such attention is warranted because of the potential misuse of price indexes.

Price indexes appear deceptively simple. Care must be taken in selecting the right index for the right problem. This article discusses three major price indexes and reviews some of the basic issues in the construction of these indexes.

The Consumer Price Index

The most commonly reported price index is the Consumer Price Index (CPI). The CPI measures the change in price of a fixed market basket of goods and services at the retail level.

The CPI reflects prices for about 400 items. Prices are collected from more than 19,000 retail establishments and 57,000 housing units in 85 urban areas across the country. The price of bread, lettuce, beer, soap, gasoline, haircuts, mortgage interest rates, physicians' fees, etc. fill the price sheet for the typical consumer's market basket used in constructing the CPI.

The CPI originated in 1913 and has been published regularly since 1921. Prices are stated in relation to base period values. The current base period is 1982-1984. The March 1990 CPI of 128.7 states that consumer prices are 28.7 percent higher than they were during 1982-1984.

In January 1978, the Bureau of Labor Statistics began publishing CPIs for two groups of population. One index, for all-urban consumers (CPI-U), covers about 80 percent of the total population. The other index is for urban wage earners and clerical workers (CPI-W) and covers about 32 percent of the population. Both indexes exclude rural areas of the country.

The CPI serves two major functions. It is used to measure purchasing power. In this respect, it provides a yardstick for revising wages, pensions, and other income payments to keep pace with price changes. It also is used as an economic indicator of the rate of inflation in the U.S. The CPI measures only consumer prices in the economy, not all prices.

An example shows how the CPI is used to measure inflation. The all-urban CPI index stood at 118.3 (with a 1982-1984 base) for 1988. The same index averaged 124.0 for 1989. Computing the percent change in the indexes for the two years measures the rate of inflation ({124.0 - 118.3}/118.3 x 100 = 4.8%).

The result means that average consumer prices were 4.8 percent higher in 1989 than they were in 1988. It is the percentage of change in the index that reflects inflation, rather than the absolute level of the index.

The importance of components of the CPI is determined by a survey of consumer expenditures. Major components and their importance are given in Table 1.

Table 1
Relative Importance of Expenditures
December 1989

Food and Beverages	17.9%
Housing	42.0%
Apparel	6.1%
Transportation	17.1%
Medical Care	6.2%
Entertainment	4.4%
Other Goods and Services	6.3%
All Items	100.0%

Note: Energy totals 7.4 percent of the CPI. Energy expenses are a subcomponent of both the housing and transportation categories

Source: Bureau of Labor Statistics

A major criticism of the CPI is the amount of weight given to the price of housing in the construction of the index. While total consumer expenditures on housing may be on the order of 42 percent of their total expenditures, critics emphasize that consumers do not buy a new house every month. Instead, house purchases are relatively infrequent.

Thus, changes in house prices from month to month will affect only consumers in the specific month in which they buy their new house. Those who choose to stay in their houses for a long term are sheltered from increases in house prices. Some economists believe that an increase in consumer wealth, through increased equity in their home brought by inflation, may spur consumers to spend more.

In addition, the way mortgage rates are handled in the housing sector has come under a great deal of criticism. When mortgage rates increase, those increases translate into increases in the CPI.

Yet at the same time, consumers who have no mortgage on their homes or those with fixed rate mortgages suffer no direct effects from increases in mortgage rates. Only those with variable rate mortgages are affected by changes in the mortgage rate. Usually those changes occur only once per year. It is important to point out that rent and utilities are also parts of the housing component.

The need to modify the CPI for these problems is widely known among economists, but long has been resisted. There appears to be no notable pressure to cure this basic problem.

The same type of criticism will apply to automobiles and other long-term durables that are purchased on occasion. While purchase patterns for automobiles are generally more frequent than those of houses, the same problem exists as in the housing sector. Because auto purchases are a much smaller part of the CPI (about 6.4 percent), little criticism has been leveled at the way they are handled in the CPI.

Recent volatility in the CPI is concentrated in two major components: food and energy. The January rise in the CPI was related to an inventory shortage of fuel on the East Coast. When extraordinary cold weather hit that part of the country, there was a rapid jump in oil prices. Similarly, once the cold weather faded, there was a fall in oil prices. That drop was augmented by some members of OPEC scrambling to increase their market share.

Similarly, the cold weather in the winter months resulted in a fruit and vegetable freeze in Florida. Thus, there was the great tomato inflation of 74.4 percent in a single month from December to January. Those skyrocketing tomato prices reversed once fruits and vegetables were purchased from Mexico rather than Florida. For the longer term, perhaps such crops as orange juice may have a carryover price problem from the freeze in the winter months. It will take a while to sort these effects.

Occasionally, there is a call for special indexes based on the CPI. For example, there is an infrequent call to create an index for senior citizens. If available, that index could be used to inflate Social Security pensions or private pensions.

In order to create such an index, we would need to know two things: the buying patterns of senior citizens and price movements of the items purchased by that group. Price movements of items purchased are readily available in the details of the CPI. All that remains is the expenditure patterns for persons age 65 and over. An indication of the buying patterns is given in Table 2.

Table 2
Relative Importance of Expenditures For Persons Age 65 and Over First Quarter 1989

Food and Beverages	18.6%
Housing	32.7%
Apparel	3.1%
Transportation	15.1%
Medical Care	11.4%
Entertainment	3.4%
Other Goods and Services	15.6%

Source: Bureau of Labor Statistics, Report 784, April 1990

In general, we would expect to find less housing expense in the index for senior citizens, as most senior citizens already own their own houses. Similarly, senior citizens tend to have a fairly good stock of consumer durables. Many seniors are able to lengthen the replacement cycles on some durables such as their automobiles. Furthermore, their collection of blankets, sheets, towels etc. accumulated during a period of child-rearing may prove to be in excess during retirement years.

On the other hand, while food expenditures are only slightly higher, there is a high proportion of expenditures for medical expenses and energy. We have a rough indication of energy expenses in both the 65 and over group and the CPI basis. The total of utilities, fuels, public service, and gasoline is 14.4 percent for 65 and over versus 10.7 percent for the CPI group.

Of the major components of senior citizen expenses, food and energy are likely to be volatile. Their volatility depends upon such things as weather patterns and supply shortages. The medical component tends to be one with a high rate of inflation. In January 1990, the total CPI was 27.4 percent above its base value in the 1982-1984 period. The rate of increase in the medical expense portion of the CPI was double the rate of the overall index in the same period.

Thus, there is an issue that those who would pay on the basis of a senior citizen CPI would not care for the volatility or the probable high rates of increase that would characterize that index. Similarly, many of the elderly might not be willing to accept the occasional downward adjustments that may filter through their index due to a downswing in the energy and food components. I suspect that this issue will be raised again from time to time depending upon the politics of the day.

There are also CPIs available for four major regions in the United States and for 29 metropolitan areas. None of the latter are in Nebraska. These indexes often are misused to make comparisons between cities (regions).

All that the indexes tell us is how prices have changed within the specific city. They do not tell whether one city has a higher cost of living than another. To make that comparison, we would need to price one basket of goods in the different cities. Such surveys are available. City price indexes could be applied to the surveys to update price comparisons.

The American Chamber of Commerce Research Association, that issues cost-of-living comparisons for a large number of cities. The major source of difference in cost of living between cities is in the cost of housing. It is difficult to compare housing costs, because housing types and neighborhoods will vary between cities.

Producer Price Index

The Producer Price Index (PPI) is another index commonly available. Less attention appears to be focused on this index, as it has a more limited audience. In general, it is thought that the future direction of the CPI may be related to changes in the PPI. Unfortunately, the changes are not on a one-to-one basis. Because different elements are used in each of the indexes, we should not be surprised that there is not a perfect lag relationship between the two price indexes.

The PPI in former years was called the Wholesale Price Index. While the name has been changed, it still measures changes in wholesale prices. This index is important to industrial buyers and sellers and can be viewed as a measure of business prices.

The list of elements used in the PPI is broad, covering 3,100 prices. The index is based upon a survey of prices received by commodity producers. The individual prices are weighted based on the value of shipments.

The PPI is reported in stages: finished goods, intermediate goods, and crude (raw) materials. There is some thought that inflation will go through the various ranks of the PPI, starting at the bottom with crude materials and working its way to the top layer of finished goods.

The linkages aren't that smooth, however, and changes in the crude materials index may not be translated ultimately to changes in finished materials. Similar to the CPI, the PPI is vulnerable to changes in energy prices. Energy prices account for 9.2 percent of finished goods, 12.3 percent of intermediate goods, and 40.5 percent of crude materials.

For finished goods, producer prices soared in January, plateaued in February, and decreased in March. Food prices are also a major part of the PPI. Food and energy prices account for 83.5 percent of the crude materials index. Thus, the PPI is a volatile index, as was evidenced recently by the impact of the winter cold snap.

It is rare that the PPI is used on its own. The use of the index is an indicator of business inflation. But its use as a rough indicator of the general direction of the future consumer prices is somewhat questionable. The usefulness of the PPI may be more in the subcomponents themselves. Contract escalator clauses can be tied to particular prices from the index. Or a set of weighted specific prices from the PPI could be used. That set of prices could be tailored to the specific product or products that were the subject of the contract.

Implicit Price Deflator

The other major price index reported is the Implicit Price Deflator (IPD) for Gross National Product (GNP). Because it covers the entire GNP, the IPD is the broadest price index concept available. The IPD is used less than either the CPI or the PPI. In part, the lesser usage is due to a substantial lag between the period the IPD covers and its publication.

The IPD is reported with the GNP release at the end of the first month after a quarter ends. The IPD is a quarterly index and not a monthly index—a further limitation on its use. As is characteristic of the GNP accounts themselves, the IPD is subject to frequent revisions, often a problem for anyone who tries to do analysis based upon that index.

Last, the general public is simply less familiar with the IPD. Although the IPD is the broadest measure available, it probably best is used to give some historical description of directions in total inflation.

The three indexes described above are all useful, and each index has its own specific use, but misuses are a concern. Use of an inappropriate index or inappropriate use of an index are common.

Because price indexes are generally outside the area of expertise of their users, it should not surprise us that they are misused. Users should give more thought to appropriate price indexes especially when they may have a large dollar impact through, for example, an escalator clause.

Inflation and Monetary Policy

Let us now turn to the issue of inflation and government policy. Persons are concerned about inflation because of the possible reaction by the monetary authority, the Federal Reserve.

The Federal Reserve controls the money supply and, in turn, influences interest rates. Money supply and interest rates are critical to overall economic expansion.

There is no question that the Federal Reserve watches inflation closely. Historically, the Fed has been willing to intervene and make corrections in runaway inflation, sometimes even when they have to act on their own.

For example, in the Volcker era, the Fed severely constrained the money supply in order to halt inflation. Many analysts blame both the timing and the depth of the 1981-1982 recession directly on the Federal Reserve.

That recession was painful, but inflation was reduced sharply. Whether the cure was worth the cost is a political judgment beyond my province.

The Federal Reserve closely monitors movements in the CPI and the PPI to determine if changes in monetary policy are needed. The historical criticism of the Federal Reserve is that they respond too late and too severely in trying to correct inflation, and their actions ultimately contribute to economic downturns.

So far, the current Federal Reserve has been patient and has followed a gradual approach. This approach allows businesses and individuals to adjust to the Fed's policy changes.

The question we must ask is how the Fed will react to a severe increase in a sustained inflation—one that is not due simply to special factors. That set of circumstances will be a true test of the Fed's ability to control inflation without strangling the economy.

Average U.S. Household Energy Consumption and Expenditures

According to a recent U.S. Department of Energy report, the average energy consumption decreased from 137.9 million BTU per household in 1978 to 100.8 million BTU in 1987, a reduction of about 27 percent. Several factors can influence this decrease, including weather conditions, personal comfort, etc. Although consumption was lower, the average energy expenditure per household increased from $724 in 1978 to $1,080 in 1987.

In 1987, most of the energy consumption (54 percent) was directed toward space heating. About 23 percent was used by appliances and about 18 percent for water heating. The remaining amount was used primarily for air conditioning.

U.S. Household Energy Consumption and Expenditures 1978, 1981, 1984, and 1987

Item	1978	1981	1984	1987
Average Energy Consumption per Household (million BTU)	137.9	114.4	104.7	100.8
Average Energy Expenditures per Household ($)	724	1,022	1,123	1,080
Prices Paid for Energy ($ per million BTU)				
All Fuels	5.26	8.93	10.73	10.71
Natural Gas	2.69	4.55	5.97	5.41
Electricity	11.85	18.51	21.94	22.34
Fuel Oil/Kerosene	3.93	8.89	7.64	5.89
Liquefied Petroleum Gas	5.05	8.74	9.91	8.91

Source: U.S. Department of Energy, Energy Information Administration, Office of Energy Markets and End Use, *Residential Energy Consumption Survey*, 1978, 1981, 1984, and 1987

Merlin W. Erickson

Buy or Rent: A Decision Framework

Ryan Peck, Undergraduate Research Associate
UNL Bureau of Business Research

The question of whether to rent or buy a residence is a universal decision. In addition to our own personal situation, many of us have been asked to advise others on the same issue.

The following general framework is offered as a practical guide for those who presently are facing the rent-or-buy question. Before proceeding, several points need to be noted. It is important to realize that the rent-or-buy decision should not be based entirely on cost factors. Intangible factors, such as a sense of security from ownership, need to be considered. Equally important, the rent-or-buy analysis needs to be based on a comparison between equivalent living units. An analysis between renting an apartment and buying a home would produce meaningless results.

The general framework for cost comparison involves three parts: net monthly cost as an owner; net monthly cost as a renter; and net savings. Each of these parts will be developed and reported separately.

The hypothetical case explored in this article involves a comparison between purchasing a house (with a purchase price of $45,000) and renting an equivalent house (with a monthly rent of $425).

Net Monthly Cost As An Owner

Several factors determine the net monthly cost. These factors include the down payment, the mortgage payment, property taxes and insurance, and income tax savings.

Down Payment

The initial investment in the purchase of any real property, such as a house, includes two components: the down payment and closing costs. A 10 percent rate will be used for the down payment, with closing costs of 2 percent. In an actual case, the down payment and closing costs are determined by the individual characteristics of each purchasing contract, attributes of the buyer, and current mortgage market conditions. A local lending institution should be consulted to determine the appropriate rates to consider.

Subtracting the down payment from the purchase price determines the amount of the loan. For this hypothetical case, the amount of the loan would be $40,500.

Purchase price	$45,000
Down payment (10% x $45,000 = $4,500)	$4,500
Amount of loan	$40,500

Mortgage Payments

To borrow the capital to purchase the home will require a monthly payment that includes an interest charge as well as some payment on principal. It is advisable to contact a representative of a local lending institution or real estate office to determine the monthly loan payment.

For this hypothetical case, a monthly payment of $355.59 will be used. That figure includes both interest and principal payments. Total payments for the first year of the loan would be $4,267 ($355.59 x 12 = $4,267.08).

Property Taxes and Insurance Cost

Property taxes depend on the assessed valuation of the property and the local mill levy. A local appraiser of property can assist in estimating the property taxes. A figure of $1,000 will be used for this case.

The approximate annual cost of property insurance for a dwelling with a market value of $45,000 is $193. Check with your local insurance agent to determine insurance cost for your specific situation.

The total cost of ownership during the first year is $5,460.08. The $5,460.08 cost figure includes total loan payments, property taxes, and insurance cost. That figure will be referred to as total gross cost.

Loan payments for first year	$4,267.08
Estimated property taxes	1,000.00
Insurance cost	193.00
Total gross cost	$5,460.08

The total gross cost of $5,460.08 needs to be adjusted to determine the total net cost for the first year.

Two factors are considered in the determination of total net cost. These factors include tax savings and equity gains. Tax savings stem from the deduction of interest charges and property taxes in computing the amount of income tax owed. The following calculations show how to figure the amount of tax savings, starting with interest charges.

Interest charges on the loan are included in the monthly loan payment. The monthly payment of $355.59 includes an interest charge of $344.50 per month. Total interest charges for the first year would be $4,134 ($344.50 x 12 = $4,134).

Interest charges and property taxes for the first year total $5,134 ($4,134 + $1,000 = $5,134). Using a conservative 15 percent tax bracket, the total of $5,134 in property taxes and interest charges would yield an income tax savings of $770.10 ($5,134 x 15% = $770.10).

Equity is the second factor used in calculating total net cost. Equity accumulation involves appreciation value plus the amount of principal paid as part of the monthly payment to the lending institution. Using a conservative estimate of 2 percent produces $900 in appreciation for the first year ($45,000 x 2% = $900).

In addition to the $900 of accumulated equity due to appreciation, there is the principal build-up through the monthly payment to the lending institution. The monthly payment of $355.59 to the lending institution includes $11.09 for principal. Total principal for the first year would be $133.08 ($11.09 x 12 = $133.08).

The total for equity accumulation and principal for the first year is $1,033.08 ($900 + $133.08 = $1,033.08).

Subtracting the equity and principal total of $1,033.08 and the tax savings of $770.10 from total gross cost of $5,460.08 gives the total net cost for the first year. Total net cost for the first year equals $3,656.90 ($5,460.08 - $1,803.18 = $3,656.90).

On a monthly basis, total net cost would equal $304.74 ($3,656.90/12 = $304.74). The monthly net cost figure of $304.74 can be compared directly with an adjusted monthly rent figure to answer the rent-or-buy question.

Net Monthly Cost As A Renter

For purposes of this hypothetical example, a monthly rate of $425 will be used to represent the current rent for a comparable house. Total rent for the first year would equal $5,100 ($425 x 12 = $5,100).

Annual rent needs to be adjusted for imputed interest income from a savings account that represents money not used to purchase a comparable house.

At a 7 percent rate of interest, interest income for the first year from a savings account of $5,400 would equal $378 ($5,400 x 7% = $378). ($5,400 represents the sum of the closing cost and down payment used earlier in this hypothetical example, i.e., $900 + $4,500 = $5,400.) Deducting the $378 in imputed interest income from the first year's rent yields a net rent of $4,722 ($5,100 - $378 = $4,722).

On a monthly basis, net rent would equal $393.50 ($4,722/12 = $393.50).

Net Savings

For the particular figures and assumptions used in this hypothetical case, it would be financially beneficial to purchase rather than rent a comparable house. Net rent is $393.50 per month. That figure compares with a net cost of ownership of $304.74 per month, for a savings of $88.76 per month or $1,065.12 for the first year.

Different figures and different assumptions can yield different results.

The purpose for this article is to offer a practical framework to those who are facing the rent-or-buy decision. The framework allows adjustments in any of the relevant factors, such as equity accumulation, interest charges, etc. Current and site-specific rates need to be used to derive meaningful and useful results.

Ryan Peck was an undergraduate research associate with the Bureau of Business Research for the 1989-90 academic year. He is currently a student at UNL majoring in finance in the College of Business Administration.

Review and Outlook

John S. Austin, Research Associate
UNL Bureau of Business Research

National Outlook

One of the most important recent economic stories was the President's announcement of tax concessions to help resolve the deficit issue. The savings and loan crisis likely was the precipitating cause for the President's move, as that crisis emphasized the deficit problem. The press used the announcement as a way to draw battle lines within Congress.

Cooperation rather than positioning, however, is required to make progress on this issue. An election year is a bad time to confront the deficit issue. Some political leaders are arguing that they should try to finish their work by mid-July.

We may see politicians delay significant progress until after the election, however, or even as late as the beginning of the new Congress. But at least serious discussion on taxes has started.

A likely outcome of the deficit compromise will be a repair of the tax bubble problem in the income tax system. Presently, tax rates peak at 33 percent of taxable income for persons on the low end of the upper income structure. That rate, however, drops to 28 percent for the wealthiest taxpayers. I suspect that the tax bubble will be eliminated, perhaps with a compromise that will lower the overall maximum rate.

Other likely targets are added taxes on alcohol, tobacco, and gasoline. It is argued that these taxes impact low income persons more severely than high income earners. Thus, the tax compromise could alienate both ends of the income distribution. Any speculation that the deficit compromise will result in an overcorrection is unfounded. In an election year, it's more likely that correction will be too small rather than too large.

Overall government spending is still a problem. There is some question about what will be done with the peace dividend. Although an obvious solution would be to dedicate large parts of that peace dividend to deficit reduction, there are likely to be those in Congress who will push their favorite underfunded programs.

A maximum spending ceiling for each fiscal year is needed desperately. That ceiling should be established in light of current economic conditions and the size of the deficit. Congress then can spend its time allocating total spending to various programs within these limits.

Mixed reports of activity characterize the plateau economy, as described in last month's issue of *Business In Nebraska*. The gloom and doomers are blowing the dust off their recession forecasts. Most of those forecasts are based upon a collapse of confidence, especially among consumers and businessmen.

The concept has some backing—retail sales dropped 0.7 percent in May. Retail sales have fallen for three months in a row, with a peak in retail sales in January of this year. In April retail sales fell 0.9 percent, following a 0.4 percent drop in March.

Furthermore, the Conference Board's Index of Consumer Confidence is down somewhat from last year. The index remains above 100, however. Consumers

Table I
National Indicators

	Annual		Quarterly (SAAR)			
	1988	1989	1989:II	1989:III	1989:IV	1990:I
Real GNP (% change)	4.4	3.0	2.5	3.0	1.1	1.9
Real Consumption (% change)	3.4	2.7	1.9	5.6	0.5	1.6
Housing Starts (millions)	1.5	1.3	1.4	1.3	1.3	1.4
Auto Sales (millions)	10.6	9.9	10.3	10.8	8.7	9.7
Interest Rate (90 day T-bill)	6.7	8.1	8.4	7.8	7.6	7.8
Unemployment Rate (%)	5.5	5.3	5.3	5.3	5.3	5.3
Money Supply, M2 (% change)	5.1	4.0	1.6	6.9	7.0	6.2
Industrial Production Index) (1987=100	105.4	108.1	108.4	108.1	108.1	108.3

NOTE: SAAR—Seasonally Adjusted at Annual Rates
Source: Bureau of Economic Analysis

are feeling good about the future, but perhaps are a bit less jubilant than they were last year at this time. Despite the drop in retail sales and somewhat softened consumer confidence, the probability of a recession in the near horizon is small.

In spite of a small rise in the latest Industrial Production Index, the real goods-producing sector is virtually flat. It is not unusual to see this flatness. Figure A shows the history of the Industrial Production Index. That history is one of short growth spurts followed by relatively long plateaus.

Furthermore, once a downturn occurs, it takes a long time for the Industrial Production Index to return to prerecession levels. In 1984 to 1986 we had a prolonged plateau, with only a slight gain over the two year period. Even so, a recession did not ensue from that period of flatness. Instead, growth began in 1987, swiftly rising until the beginning of 1989. In early 1989, the index hit another plateau.

With industrial production flat, it is no surprise that investment plans have been reduced. Businesses still plan to increase their investment for 1990 over 1989 levels. Especially noticeable are large increases in plans for air transport investment on the order of nearly 40 percent and for commercial development investment on the order of 9.4 percent. All other major components of the nonresidential investment block are showing anticipated gains of 5 percent or less.

The key to a recession remains the interest and inflation area. Recent discussion has turned to distribution problems. Some argue that small businesses are suffering from a rationing of credit. Furthermore, the housing industry is in a major slump due to rationing of mortgage credit. On an overall basis, the Fed argues that funds are ample and that inflation has cooled. Most sectors of the economy are in good shape.

The major exception is housing. That sector has taken a beating, with the May figure for housing starts showing the lowest figure since October 1982. A large part of the downturn has been in the multiple family area. As a general rule, the Midwest residential construction has been an exception. Should mortgage rates fall in the near term, the housing sector could turn around on a national basis.

Auto sales rebounded in late June, gaining 11.9 percent from year ago figures. This was the only period in the second quarter when auto sales exceeded their year ago levels. U.S. domestic manufacturers have taken most of the downturns. Japanese transplant vehicles are doing well. The U.S. plants of both Honda and Toyota are showing 60 percent increases in sales over last year. The Japanese share, including imports and transplants, grew to 28 percent of the U.S. market in the first half of this year.

Figure A
Monthly Industrial Production Index
1967 to Present
(1987 = 100)

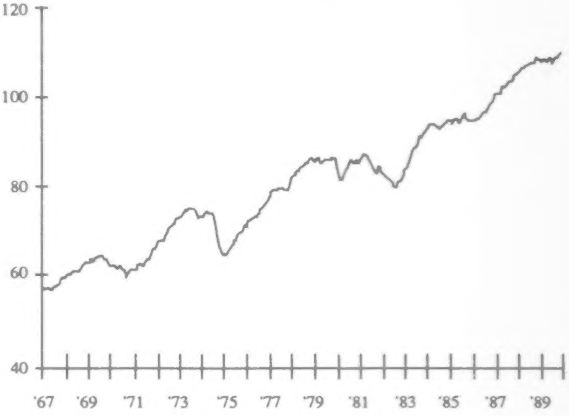


Table II
Employment in Nebraska

	Revised April 1990	Preliminary May 1990	May % Change vs. Year Ago
Place of Work			
Nonfarm	722,725	729,776	2.7
Manufacturing	95,716	95,791	1.6
Durables	46,924	46,802	0.8
Nondurables	48,792	48,989	2.4
Mining	1,562	1,628	3.5
Construction	25,223	25,480	2.2
TCU*	46,511	46,764	2.5
Trade	185,186	186,272	0.8
Wholesale	55,150	55,462	2.6
Retail	130,036	130,810	0.1
FIRE**	48,325	48,332	0.7
Services	173,501	174,681	4.0
Government	146,701	150,828	5.5
Place of Residence			
Civilian Labor Force	837,778	846,085	4.56
Unemployment Rate	2.4%	2.0%	

*Transportation, Communication, and Utilities
**Finance, Insurance, and Real Estate

Source: Nebraska Department of Labor

Table III
Price Indices

	May 1990	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U* (1982-84 = 100)			
All Items	129.2	4.4	5.0
Commodities	121.4	3.3	4.6
Services	137.6	5.2	5.2
Producer Price Index (1982 = 100)			
Finished Goods	117.7	3.1	4.4
Intermediate Materials	112.9	0.2	1.1
Crude Materials	104.2	-2.0	2.0
Ag Prices Received (1977 = 100)			
Nebraska	169	6.3	2.8
Crops	135	-5.6	-8.3
Livestock	190	11.8	7.9
United States	154	3.4	2.6
Crops	135	-4.3	-4.6
Livestock	172	10.3	8.5

U* = All urban consumers
Source: U.S. Bureau of Labor Statistics

The GNP revision process continues its amusing display. Additional exports were discovered for the first quarter in the latest data. Starting with an advanced (first) report of real GNP increasing in the first quarter of this year 2.1 percent, the preliminary (second report) showed that GNP increased only 1.3 percent. In the final report (third) on GNP, real GNP shows an increase of 1.9 percent.

The inventory problem we reported in last month's issue of *Business In Nebraska* is the major retarding force on the first quarter numbers. The final report will be revised in late July. That revision will accompany an annual revision of all the GNP figures. We also will receive our first guess at second quarter GNP at that time. It surely will be revised in ensuing months.

Inflation in May gained moderately. The Producer Price Index advanced 0.3 percent from the previous month. That reversed a three month fall in producer prices.

The downturn helped correct an energy price run during the winter. West Texas crude oil remains below $18 a barrel. Crude oil stocks are ample. Thus, we see little pressure on wholesale energy prices at this time.

The Consumer Price Index (CPI) advanced only 0.2 percent in May, but was still 4.4 percent ahead of year ago levels. Medical care showed an increase of 9.0 percent versus a year ago. This particular component of the CPI has gained steadily at rates well above the overall rate for the CPI for several years now.

Nebraska Outlook

Despite violent weather during the spring, Nebraska farmers continued to do well. Subsoil moisture is 25 percent short, whereas a year ago it was 93 percent short.

Spring weather has brought some hail damage. Replanting already has started on some damaged crops. In addition, flooding has destroyed some corn and wheat.

Weather patterns are highly variable across the state. For the period April 1 through June 29, the northwest area of the state had only 70 percent of normal accumulation. The high was 116 percent of normal accumulation in the flooded northeast part of the state. Record high temperatures were reported in some parts of the state.

Table IV
City Business Indicators
March 1990 Percent Change from Year Ago

The State and Its Trading Centers	Employment (1)	Building Activity (2)
NEBRASKA	4.9	83.3
Alliance	2.3	-51.9
Beatrice	3.8	151.9
Bellevue	2.9	43.8
Blair	2.9	-81.6
Broken Bow	2.6	42,338.2
Chadron	6.9	-24.7
Columbus	6.8	-3.0
Fairbury	2.7	61.0
Falls City	8.1	-2.3
Fremont	8.7	35.2
Grand Island	4.4	-1.2
Hastings	5.7	56.7
Holdrege	2.6	164.6
Kearney	5.3	128.7
Lexington	7.5	29.5
Lincoln	4.2	12.6
McCook	2.7	147.7
Nebraska City	-0.5	161.9
Norfolk	10.9	49.8
North Platte	9.4	33.6
Ogallala	7.8	69.4
Omaha	2.9	28.5
Scottsbluff/Gering	3.4	54.3
Seward	5.7	118.2
Sidney	4.6	-62.1
South Sioux City	3.0	-63.3
York	10.4	-14.6

(1)As a proxy for city employment, total employment (labor force basis) for the county in which a city is located is used

(2)Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes

Sources: Nebraska Department of Labor and reports from private and public agencies

Figure I
City Business Index
March 1990 Percent Change from Year Ago

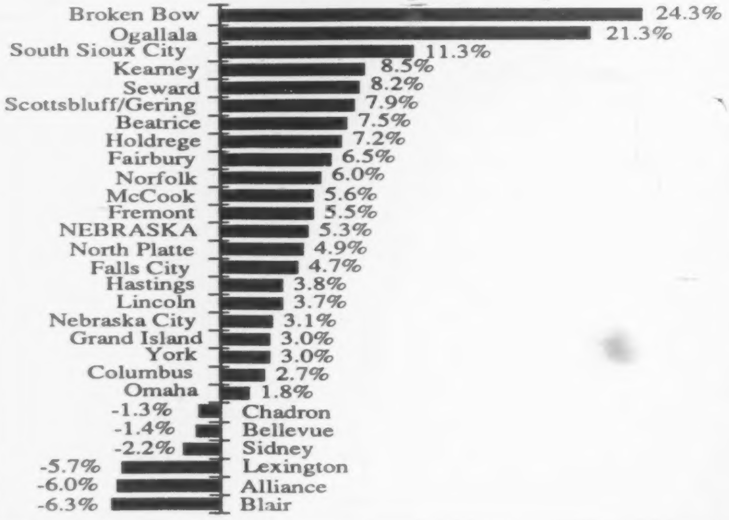
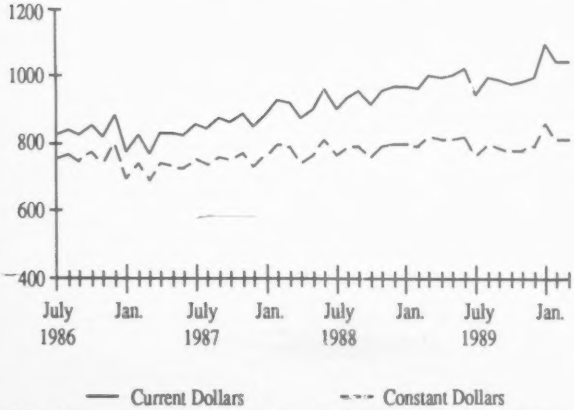


Table V
Net Taxable Retail Sales of Nebraska Regions and Cities

Region Number and City (1)	City Sales (2) March 1990 (000s)	City Sales (2) % Change vs. Year Ago	Region Sales (2) March 1990 (000s)	Region Sales (2) % Change vs. Year Ago	YTD % Change vs. Year Ago
NEBRASKA	$925,012	5.5	$1,055,284	4.5	8.0
1 Omaha	313,339	3.5	386,658	2.7	8.4
Bellevue	12,526	-5.4	*	*	*
Blair	4,862	6.5	*	*	*
2 Lincoln	121,300	8.1	140,934	7.4	7.1
3 South Sioux City	6,270	40.0	8,474	28.9	30.2
4 Nebraska City	3,703	2.0	19,145	9.7	9.0
6 Fremont	16,421	5.4	30,709	4.6	9.3
West Point	3,039	7.5	*	*	*
7 Falls City	2,355	7.9	9,798	-0.4	4.0
8 Seward	5,031	9.5	16,085	4.2	8.0
9 York	6,747	3.0	15,935	-0.5	-0.1
10 Columbus	15,840	4.8	29,345	2.4	6.6
11 Norfolk	19,425	3.3	35,959	5.5	4.7
Wayne	2,781	-0.9	*	*	*
12 Grand Island	35,798	7.6	51,181	6.8	7.4
13 Hastings	15,824	2.9	27,249	6.8	1.5
14 Beatrice	8,539	8.3	19,752	6.8	9.5
Fairbury	2,775	12.3	*	*	*
15 Kearney	20,055	10.3	28,576	6.8	1.7
16 Lexington	5,760	-19.2	17,161	-5.7	-0.8
17 Holdrege	4,764	8.3	9,031	3.2	4.8
18 North Platte	15,014	3.5	19,491	4.7	9.4
19 Ogallala	5,731	41.4	11,813	21.8	5.9
20 McCook	8,191	5.2	11,817	2.1	0.3
21 Sidney	3,722	6.1	7,882	2.5	2.0
Kimball	1,779	7.4	*	*	*
22 Scottsbluff/Gering	18,814	15.2	26,566	4.8	4.3
23 Alliance	5,124	-3.1	13,222	-4.9	0.0
Chadron	2,632	-1.9	*	*	*
24 O'Neill	4,113	1.7	14,745	9.8	5.9
Valentine	2,356	10.4	*	*	*
25 Hartington	1,785	28.1	8,807	2.9	2.4
26 Broken Bow	3,236	-9.2	11,712	-4.2	1.4

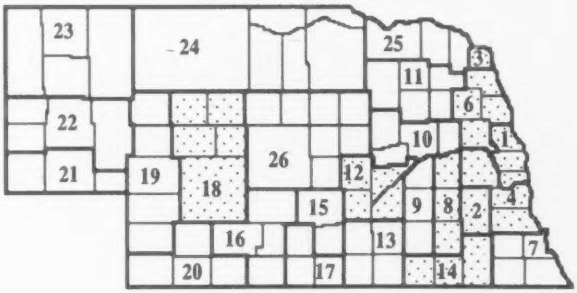
(1) See region map
(2) Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales
* Within an already designated region
Compiled from data provided by the Nebraska Department of Revenue

Figure II
Nebraska Net Taxable Retail Sales
(Seasonally Adjusted, $ Millions)



(1) The Consumer Price Index (1982-84 = 100) is used to deflate current dollars into constant dollars

Figure III
Region Sales Pattern
YTD as Percent Change from Year Ago



Shaded areas are those with sales gains above the state average. See Table V for corresponding regions and cities

Retail sales in Nebraska advanced 4.5 percent in March, 8.0 percent on a year-to-date basis through March. These gains are shared across the state, with only two regions showing sales below year ago levels on a cumulative basis.

As in the case of the U.S., January was a peak for retail sales in our state. Nevertheless, March levels of retail sales were at healthy levels.

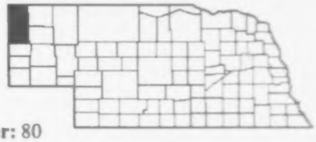
Nebraska's construction sector continues to do well. The building permits number in the scoreboard on page 1 shows a dramatic increase. While things are in good shape in the construction area, I do not expect that permit number to be repeated in the future.

According to F.W. Dodge, on a five month accumulated basis through the end of May, the value of total construction activity showed a 40 percent gain over year ago levels. The nonbuilding and building construction areas both share in that gain. This year's accumulated activity through May shows a doubling of values over last year's figures for both commercial and manufacturing building. Total nonresidential building activity has increased 88 percent.

Unemployment in the state remains low at 2.0 percent in May. Lincoln's unemployment was 1.6 percent, the lowest since November 1973 when it was 1.5 percent. Job advances in the area of 2.5 percent to 3.0 percent for the last year and a half help explain the low unemployment rate in our state.

County of the Month

Sioux



Harrison--County Seat

License plate prefix number: 80
Size of county: 2,063 square miles, ranks 6th in the state
Population: 1,600 (estimated) in 1988, a change of -12.1 percent from 1980
Median age: 33.8 years in Sioux County, 29.7 years in Nebraska in 1980
Per capita personal income: $17,567 in 1989, ranks 8th in the state
Net taxable retail sales ($000): $3,420 in 1989, a change of +0.7 percent from 1988; $759 during January-March 1990, a change of +3.4 percent from the same period one year ago
Number of business and service establishments: 34 in 1987; 76 percent had less than five employees
Unemployment rate: 1.5 percent in Sioux County, 3.1 percent in Nebraska for 1989
Nonfarm employment (1989):

	State	Sioux County
Wage & salary workers	705,672	176
	(percent of total)	
Manufacturing	13.4%	*
Construction and Mining	3.6	*
TCU	6.5	*
Retail Trade	18.5	9.7%
Wholesale Trade	7.6	6.3
FIRE	6.8	*
Services	23.7	6.8
Government	19.9	53.4
Total	100.0%	100.0%

Agriculture:

Number of farms: 353 in 1987, 365 in 1982
Average farm size: 3,180 acres in 1987
Market value of farm products sold: $39.6 million in 1987 ($112,318 average per farm)

Sources: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, Nebraska Department of Labor, Nebraska Department of Revenue
*Data not available because of disclosure suppression

Merlin W. Erickson

Business in Nebraska

PREPARED BY BUREAU OF BUSINESS RESEARCH
Association for University Business & Economic Research

Business in Nebraska is issued as a public service and mailed free of charge upon request to 200 CBA, University of Nebraska-Lincoln, Lincoln, NE 68588-0406. Copyright 1990 by Bureau of Business Research, University of Nebraska-Lincoln. ISSN 0007-683X.

July 1990, Volume 45 No. 550

University of Nebraska-Lincoln-- Martin Massengale, *Chancellor*
College of Business Administration--Gary Schwendiman, *Dean*

Bureau of Business Research
F. Charles Lamphear, *Director*
Merlin W. Erickson, *Research Associate*
Margo Young, *Communications Associate*
John S. Austin, *Research Associate*
Barbara Sumsion, *Composing Technician*
Lisa Darlington, *Secretary*
Carol Boyd, *Secretary*
Dave DeFruiter, *Information Systems Coordinator*

The University of Nebraska-Lincoln does not discriminate in its academic, admission, or employment programs and abides by all federal regulations pertaining to same.

Nonprofit Org.
U. S. Postage
PAID
Lincoln, Nebraska
Permit No. 46

69

CONGRESSIONAL INFO SERVIC27023
SRI BR
4520 EAST-WEST HWY
BETHESDA, MD 20814

Business In Nebraska

August 1990
Vol. 45 No. 551

Prepared by the Bureau of Business Research
200 College of Business Administration
University of Nebraska-Lincoln
Lincoln, NE 68588-0406
402/472-2334

Labor Market Sectors and Economic Development: The Nebraska Panhandle

James W. Marlin, Jr.
President, Nebraska Council on Economic Education and
Courtesy Professor of Economics, University of Nebraska-Lincoln

In the last 20 years, the nation and Nebraska have experienced broad sweeping changes in employment and earnings patterns for major sectors of the economy. These trends show decreases in agriculture's share and increases in the service sector's share of total employment.

In marked contrast, Nebraska's Panhandle region has shown an increase in the relative importance of agriculture and virtually no change in relative importance of the service sector. In 1988, the Panhandle's per capita personal income was slightly lower than the state overall.

There is cause for concern because growth in Panhandle income has slowed. While real per capita income in the Panhandle increased sharply from 1969 to 1979, it fell from 1980 to 1988.

Thus, future development in the Panhandle becomes an important issue. Will there be a continuation of the stagnation of the '80s, or will growth resume? What are the implications for some of the small communities in the area?

General Trends

To put the Panhandle trends in context, let us first briefly review trends in the national and Nebraska economies. Data in Table 1 (on page 2) show the proportion of employment in major economic sectors.

The downward direction of agricultural employment is reflected for both the U.S. and Nebraska. Although the proportion of farm jobs in Nebraska is higher than the U.S., the trend is still downward. The proportion of farm jobs in Nebraska is currently less than 10 percent.

Manufacturing also shows a strong downward trend for both the nation and the state. The U.S. proportion of manufacturing jobs has decreased 34 percent over the period. Nebraska's manufacturing sector has not dropped as rapidly. Nebraska's share of the labor force in manufacturing is only about half of what it is for the nation.

Transportation, communication, and utilities (TCU) and government (including public schools) have shown decreases in both the U.S. and Nebraska, although the decreases have not been as dramatic as in the case of agriculture and manufacturing.

By definition, decreases in the share of one sector must be offset by increases in another. In this sense, decreases in the relative size of agriculture and manufacturing have been balanced by increases in other sectors. The most notable gains have occurred in the service sector and in fi-

State Economic Scoreboard

Change from same month one year ago

	State	Metro+	Nonmetro
Motor Vehicle Sales (April) Constant $	↓ -0.4%	↓ -5.0%	↑ 3.8%
Nonmotor Vehicle Sales (April) Constant $	↓ -1.6%	↓ -5.2%	↑ 2.3%
Building Activity (April) Constant $	↑ 8.2%	↑ 7.6%	↑ 9.0%
Employment (August)	↑ 6.9%	↑ 5.3%	↑ 8.5%
Unemployment Rate* (August)	↓ 2.0%	↓ 2.1%	↓ 2.0%

+Omaha and Lincoln. *Unemployment is this month's rate, not a percent change from year ago.

Table 1
Percentage of Employment by Sector

	Agri/Mi	Mfg.	Constr.	TCU	Whole. Trade	Retail Trade	FIRE	Serv.	Govt.
				United States					
1969	5.8	22.9	5.0	5.3	4.6	14.9	5.3	18.2	18.0
1974	5.5	20.7	5.1	5.2	4.7	15.5	6.0	19.6	17.7
1979	5.2	19.3	5.3	5.0	5.1	15.9	6.5	21.1	16.6
1984	5.0	16.8	5.1	4.9	5.0	15.6	7.3	24.5	15.9
1988	4.2	15.0	5.3	4.8	4.9	16.6	7.5	26.3	15.4
% Change									
1969-88	-27.3	-34.4	7.2	-10.6	7.1	10.9	43.4	44.2	-14.5
				Nebraska					
1969	13.6	12.8	5.3	5.9	4.2	17.4	5.2	17.4	18.2
1974	12.4	12.3	5.3	5.9	4.1	17.7	6.0	18.2	18.1
1979	11.3	11.7	5.4	6.2	5.8	16.6	6.6	19.1	17.3
1984	10.7	10.8	4.6	5.9	5.7	16.2	7.3	21.7	17.0
1988	9.2	10.7	4.4	5.6	5.6	16.5	7.5	23.8	16.7
% Change									
1969-88	-32.8	-16.4	-15.7	-4.9	34.8	-5.5	44.1	36.7	-8.2

TCU = Transportation, Communication, and Utilities
FIRE = Finance, Insurance, and Real Estate
Agri/Mi = Agriculture, Fishing, Forestry, and Mining
Percentage changes in shares are approximate due to rounding
Source: U.S. Bureau of Economic Analysis

nance, insurance, and real estate (FIRE). While Nebraska's growth in services has been dramatic, it lags slightly behind the growth for the U.S. as a whole.

In construction and retail trade, Nebraska trends have run counter to those for the U.S. More recent data show a reversal for construction—Nebraska's construction has gained in 1990, while it has dropped for the U.S. Nebraska's gain in wholesale trade outstripped the U.S. gain.

To take the process one step further, we break the largest category, services, into its component parts for the U.S. and for Nebraska in Table 2 on page 2. The percentages reflect total employment in the service sector, rather than total employment for all sectors.

Most service categories are straightforward, such as hotels and lodging. Others need some detailing. Personal services include laundry, beauty shops, funeral services, etc. Business services include advertising, computer services, building maintenance, credit reporting and collection, etc. Membership organizations include unions, business associations, churches, etc. Miscellaneous services include engineers, architects, accountants, and auditors. Other services include miscellaneous repair, museums, private education, and motion pictures.

There is concern that a shift to a service economy will mean lower wages than would characterize a manufacturing-based economy. Within the service sector, however, increases in employment have been greatest where incomes tend to be higher (such as health care and business services). In the categories with lower incomes (such as household services or hotel services), the shares either have decreased or remained the same. Growth in the higher paying service jobs will help mitigate the shift from manufacturing.

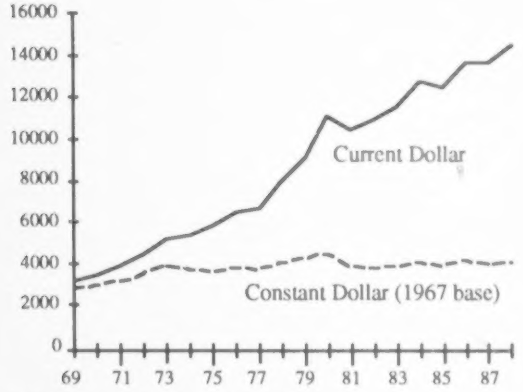
In the areas where tourism should be reflected (such as hotel and lodging and amusement and recreational services), Nebraska has lost ground relative to the United States. Some of those involved in tourism in Nebraska, however, are counted in the government sector.

Table 2
Service Employment Shares

	Hotel	Amuse. Rec.	Personal Services	House-hold	Business Services	Auto Repair	Health Services	Legal Services	Social Services	Member. Org.	Misc. Services	Other Services
						United States						
1969	5.9	3.9	10.1	14.3	11.9	3.5	19.1	2.6	0.0	10.9	6.1	11.7
1974	5.7	4.5	8.1	9.9	13.6	3.6	22.7	2.9	0.0	9.8	7.7	11.4
1979	5.1	4.5	7.4	7.4	16.3	3.8	23.6	3.1	4.5	6.7	7.9	9.6
1984	4.9	4.3	7.4	5.6	20.1	3.8	23.5	3.5	4.3	5.3	8.0	9.2
1988	4.8	4.0	7.7	4.3	22.1	3.8	24.8	3.5	4.6	4.6	7.4	8.4
% Change												
1969-88	-18.9	2.6	-23.6	-70.2	85.6	9.4	29.6	37.3	1.1*	-57.6	20.4	-27.7
						Nebraska						
1969	6.8	4.5	10.0	13.6	9.4	4.3	22.8	2.5	0.0	10.9	4.8	10.5
1974	6.8	4.8	8.9	9.0	10.4	4.2	25.0	2.8	0.0	10.3	7.3	10.4
1979	5.1	4.8	9.1	6.5	13.7	4.3	26.2	2.8	4.3	7.0	7.2	9.1
1984	4.6	4.6	9.2	5.0	17.3	4.5	26.1	2.9	4.1	6.0	6.8	9.0
1988	3.8	4.3	10.4	3.8	21.7	4.5	25.1	2.8	4.3	5.2	6.0	8.1
% Change												
1969-88	-43.4	-3.7	3.7	-72.0	130.0	4.3	10.0	12.6	0.6*	-52.4	25.3	-22.7

*Percent changes for Social Services are calculated from 1979-1988; changes are approximate due to rounding
Source: U.S. Bureau of Economic Analysis

Figure 1
Panhandle Per Capita Personal Income



Source: U.S. Bureau of Economic Analysis

Analysis of Panhandle Trends

Major concern in Nebraska has centered on the economic future of rural parts of the state. The analysis in the previous section can be helpful in understanding the trends in rural Nebraska. The Panhandle region contains some of the least populated counties in the state. The counties included in the Panhandle region are Banner, Box Butte, Cheyenne, Dawes, Deuel, Garden, Kimball, Morrill, Scotts Bluff, Sheridan, and Sioux. Useful comparisons can be made between the Panhandle and other rural areas of the state.

Figure 1 shows what has happened to per capita income in the Panhandle. The solid line shows growth in current dollar (nominal) per capita personal income in the area.

Current dollar personal income is the actual money paid to individuals (before taxes) in the form of wages, interest, rents, and profits plus any forms of transfer payments, such as pensions or farm support payments.

The dotted line is perhaps more instructive—it shows real per capita income; that is, income after the effects of inflation have been removed. Real per capita income reflects the buying power of that income.

While income has risen in the Panhandle, the increase has not been as dramatic as nominal income would indicate. Real income rose over the first ten years, peaked in about 1980, and then fell with the recession of the early '80s. It has remained stagnant for the last few years.

Table 3 on page 3 compares trends in nominal and real personal income for the U.S. and Nebraska with the Panhandle. Real personal income has continued to grow over the 20 year period for both the U.S. and Nebraska, while Panhandle real income has decreased in the last ten years.

Because there is much interest in the development of towns and communities in the area, another indication of trends in economic conditions for the area is the level of retail trade. Table 4 (on page 4) shows retail trade figures for Nebraska and the Panhandle for the last ten years. Again, these figures are stated in real terms (1982 dollars).

The table shows that real (constant dollar) retail sales in 1989 for the Panhandle fell 35 percent from what they were in 1980, an average decrease of 4.6 percent annually. Although Nebraska sales figures fell during the same time period, the drop was only about 1.3 percent.

The decreases in retail sales are overstated, as data collected by the state are for taxable sales only. Prior to 1983, food was included in the figure. To eliminate this problem, ratios are made between Nebraska and the Panhandle. As both experienced the tax change at the same time, the ratios represented will not be affected.

The third line of Table 4 shows the ratio of the Panhandle to Nebraska in terms of retail sales. For example, in 1989 Panhandle retail sales were 4.59 percent of the total retail sales in Nebraska. In 1980, they were 6.24 percent.

There are two possible reasons why the Panhandle's percentage of the state's retail sales may have fallen. The number of persons may have decreased, or there may have been more fundamental changes. To determine the effect of population changes on retail changes, Table 4 shows the relative populations of the state and the Panhandle. By dividing the retail sales by the population, we can see if the loss was due to population change.

As shown in the third part of the table, this was not the case. Although the Panhandle region lost population from 1980 to 1988, so did Nebraska; the ratio shows some decline, but not as much as the decline in retail sales. In 1980, per capita retail sales nearly equalled the state level. By 1988, they were less than 80 percent of the state level.

One may ask how real per capita personal income was virtually flat from 1980 to 1988 while real per capita retail sales fell over 32 percent. A plausible answer is that individuals are shopping outside the

Table 3
Per Capita Personal Income
U.S., Nebraska, and the Panhandle

	Current Dollars			Constant Dollars (1982-1984)		
	U.S.	Nebraska	Panhandle	U.S.	Nebraska	Panhandle
1969	3,808	3,543	3,106	10,377	9,655	8,464
1974	5,648	5,405	5,375	11,456	10,963	10,902
1979	9,033	8,854	9,163	12,443	12,196	12,622
1984	13,114	12,324	12,699	12,621	11,861	12,222
1988	16,489	14,774	14,482	13,939	12,489	12,242
Average Annual % Growth 1969-88	8.01	7.80	8.44	1.56	1.36	1.96

Source: U.S. Bureau of Economic Analysis

Table 4
Net Taxable Retail Sales
Nebraska and the Panhandle

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
					Retail Sales (Constant dollars, thousands)					
State	10,935,921	10,462,562	9,714,897	9,445,396	8,912,704	8,564,322	9,106,676	9,026,978	9,593,244	9,701,476
Panhandle	682,735	650,242	569,179	537,808	472,697	450,694	447,803	432,896	450,380	445,658
PH/NE	6.24%	6.21%	5.86%	5.69%	5.30%	5.26%	4.92%	4.80%	4.69%	4.59%
					Population (thousands)					
State	1,573	1,583	1,590	1,597	1,605	1,605	1,598	1,594	1,602	NA
Panhandle	98.6	99.4	99.3	98.8	98.5	98.1	97.7	96.6	95.4	
PH/NE	6.27%	6.28%	6.25%	6.19%	6.14%	6.11%	6.11%	6.06%	5.96%	
					Retail Sales Per Capita (Constant dollars)					
State	6,952	6,609	6,110	5,914	5,553	5,336	5,699	5,663	5,988	NA
Panhandle	6,924	6,542	5,732	5,443	4,799	4,594	4,583	4,481	4,721	
PH/NE	99.60%	98.98%	93.81%	92.04%	86.42%	86.10%	80.43%	79.13%	78.84%	

Source: Nebraska Department of Revenue

area or they are engaged in more catalogue buying. The downward direction in retail sales, particularly in comparison to the rest of the state, should be a concern for the area and should be taken into account in any plans for economic development.

Another part of the reason for the downward trend may be how retail sales are counted. In some cases, retail sales are reported as sales from the community where the books are kept, rather than in the place of sale for stores that are part of a chain or are owned by an individual in a different area. Any acquisitions of retail businesses by those outside the Panhandle would tend to exaggerate the trend.

Another trend to examine is the share of labor in each of the sectors. Unfortunately, neither jobs nor labor force participation figures are available on a community by community basis. Figures for earnings by county and by sector from the personal income reports are available, however. Summing these figures for the Panhandle and dividing by total earnings for the region yields the figures in Table 5 (page 4).

Using earnings figures will produce slightly different total sector numbers, but the percentages of the total will be similar to the percentages of total jobs in each sector. Because transfer payments such as farm subsidies are included in the data, the use of earnings shares is likely to exaggerate the relative size of the sectors in which there are large transfer payments. Thus, the agricultural sector may be overstated.

There is one caution about placing too much emphasis on the specific figures in Table 5. Because these numbers are aggregated from county numbers, there may be some anomalies. On data reported by county, confidentiality is preserved. Therefore, when there is only one firm, for example, data are not reported so that an individual's income cannot be traced. This will tend to make the percentages not total 100 percent. Regardless of these differences, when viewed over a period of 20 years, the trends can be interpreted.

Table 5 shows the percentages of personal income earned in each sector for the 20 years ending in 1988. As one may expect in the Panhandle, the agricultural sector numbers are much higher than for the United States as a whole or for Nebraska. Annual percentages in farm income vary more in the Panhandle and even show an increase in their proportion.

The changing proportion may be due to the widely fluctuating farm commodity

Table 5
Earnings Shares by Sector
U.S., Nebraska, and the Panhandle

	Agri/Mi	Constr.	Mfg.	TCU	Whole. Trade	Retail Trade	FIRE	Serv.	Govt.
				United States					
1969	4.3	6.6	28.1	7.0	5.9	10.8	5.5	15.4	16.2
1974	5.3	6.6	25.4	7.4	6.3	10.6	5.3	16.2	16.9
1979	4.6	7.0	24.9	7.5	6.6	10.2	6.1	17.6	15.4
1984	3.9	6.3	22.6	7.3	6.5	9.8	6.3	21.5	15.9
1988	3.2	6.4	20.3	6.7	6.5	9.5	7.3	24.4	15.6
				Nebraska					
1969	15.2	7.1	15.5	8.4	5.8	12.5	5.4	13.8	16.2
1974	13.5	7.4	14.9	9.3	6.3	12.5	5.4	13.8	16.7
1979	11.7	7.5	14.9	10.3	7.9	10.9	6.1	14.7	16.0
1984	10.4	5.9	14.2	10.7	7.3	9.6	6.5	17.8	17.6
1988	11.4	5.2	13.6	9.2	7.1	9.0	6.9	20.2	17.5
				Panhandle					
1969	22.8	6.1	8.4	8.3	4.7	17.3	3.2	14.2	13.9
1974	22.5	7.7	10.1	12.0	4.8	15.0	2.7	11.4	13.2
1979	23.8	6.1	8.8	15.6	6.3	11.8	3.1	11.9	11.7
1984	26.7	4.5	6.5	16.0	5.3	10.7	3.1	12.9	13.1
1988	27.6	3.9	6.5	15.1	4.7	9.8	3.0	15.3	13.5
% Change									
1969-88	21.0	-35.5	-22.5	82.7	0.0	-43.4	-6.7	8.1	-2.4

TCU = Transportation, Communication, and Utilities
FIRE = Finance, Insurance, and Real Estate
Agri/Mi = Agriculture, Fishing, Forestry, and Mining
Source: U.S. Bureau of Economic Analysis

prices and quantities or to changes in farm subsidies. Because of the fluctuations, it is difficult to say much about trends in the agricultural sector except that such trends indicate a decidedly different pattern than for the state and the nation.

For the Panhandle, some of the sectors (such as wholesale trade, the financial sector, and government) show fluctuations but few trends. Services show little change, in stark contrast to the U.S. and the rest of Nebraska. That lack of change could reflect the lack of development in the region.

The transportation, communication, and utilities sector has shown a substantially increasing trend, while construction and manufacturing have fallen moderately. These changes seem to reflect general economic decline in the area. The reasons for the retail trade decline also would explain this drop in sector proportions.

Using Trend Information to Plan for Economic Development

The information contained in the tables will not be thrilling news to residents of the Panhandle. The situation in the region is not good, and the trends seem to be going in the wrong direction.

The important question to be answered is "Can something be done about it, and, if so, what?" The answer to the first part is "yes." I will try to address the second part in the remainder of this article.

What has preceded in the article is fact; what follows is opinion. The first bit of advice I offer is that fighting the trends is usually self-defeating; trying to use the trends to your advantage makes good sense.

John Naisbitt in his book *Megatrends* observes that as large inner cities have decayed and lost importance to the suburbs, so will metropolitan areas in time decrease as more businesses look for locations with the good life. He predicts that there will be continued growth in smaller towns. I would add that these towns must be big enough to sustain growth.

There is every indication that population in the Panhandle will continue to decrease. The Bureau of the Census has predicted that by 2010 (only 20 years from now), there will be 50,000 to 60,000 fewer Nebraskans. With continued growth in the urban areas of Nebraska, this means that population will decrease at an even greater rate in rural areas than it will in the state as a whole. Hardest hit likely will be the smallest towns.

We learn from observing the trends in population and in the numbers of persons who make their living from agriculture something that should be obvious. Not every town in the Panhandle is going to survive--perhaps some of those towns should not survive, in an economic sense.

To survive, towns must be big enough; they must reach a critical mass. Economic efficiency dictates that the changes that have occurred in transportation, communication, and merchandising mean a realignment of where persons live and work.

No matter what the sentimental attachment we may have with our hometown, the fact is that it may be more efficient to let the change occur. This conclusion will be a bitter pill for many residents of the Panhandle to swallow. But let us not kill the messenger, let's look at the message.

The trends in retail trade may give us some clues about what and what not to do. Encouragement of additional retail trade in the area may not be a good idea. As demand falls, the number of retailers should fall. Nothing is so discouraging to a town than working hard to bring in a new business and watching an established business falter and fail shortly thereafter.

I can remember when I lived in a small town in Illinois that had three supermarkets. In an effort to increase economic development, a new supermarket chain was courted to increase business. Within three months of its arrival, one of the existing supermarkets had closed. The point is that additional retail outlets need a market to survive. Making existing stores better to attract existing customers is a better strategy than bringing in more stores.

Markets for services depend on individuals to buy the services. Services that serve manufacturing industries can survive and prosper as long as the basic industry survives. Services that serve only individuals will survive only if there are enough persons to be served.

Recently in eastern Nebraska, it seemed that gambling endeavors would be profitable forever. The horse tracks were doing good business and the dog track in Council Bluffs, Iowa was filled with eager bettors. Many towns, seeing a bonanza, wanted a piece of the action—local lotteries appeared to be the answer to local financing problems. Iowa recently passed a law allowing riverboat gambling.

Yet all is not well in the gambling industry (a service). Receipts are down and are projected to worsen. Kansas City has built new horse and dog tracks, and attendance at Ak Sar Ben and Bluffs Run has decreased substantially. Why has the turnaround in the gambling business occurred? Simply because there are not enough gamblers to use all the services.

The observation about the increasing importance of medium size town development should help the Panhandle and other areas of the state. In areas that are mostly rural, reaching the critical mass can be achieved best by regional cooperation. Although it may go against our competitive nature, cooperative endeavors by groups of towns will have a better chance than the go-it-alone, get-ours-first strategies that many towns have adopted in the past.

There are many innovative ways that communities can work together. Imagine a farmer having an essential part malfunction on his combine that he normally would have to get from the factory because no local parts store carries it. The farmer goes to his computer, checks the part number on the inventory list, and orders and pays for it by computer. One hour later, the regional part center delivers the part to the farmer's field. The part is replaced and the farmer is back in business. This kind of scenario is possible in the not too distant future.

The future of the Panhandle can preserve the good life, but that life most assuredly will be different from what it was a generation or more ago. Examining the trends can help one understand what is happening and can be instructive in preparing for the future. In most cases, the trends are irreversible. We will do better to attempt to understand and use the trends rather than try to reverse them. The best generals in history had a knack for turning retreats into victory. It is time to focus on the advantages that new approaches offer in developing our state's rural areas.

This article was presented previously as part of a community revitalization workshop at Chadron State College in June 1990. Opinions expressed are those of the author, 402/472-2333.

1988 Personal Income Estimates for Nebraska and Nebraska Counties

Total and per capita personal income estimates for all states and counties for 1988 recently were released by the U.S. Department of Commerce, Bureau of Economic Analysis. Personal income is defined as the income received by, or on behalf of, all residents of an area. It is the total income received from wages and salaries, other labor income, proprietors income, investment income, and transfer payments. Personal contributions for social insurance are deducted. Per capita personal income is the result of dividing total personal income by population estimates provided by the Bureau of Census.

Total and per capita personal income for Nebraska and its counties are shown below. Also shown are the percentages of total personal income originating from farm and nonfarm sources and county rankings of per capita personal income estimates.

County income estimates should be used with some caution. Especially in counties with small populations, per capita personal income figures are rough approximations. Further, although it would be desirable to have median (midpoint) personal income data, only mean (average) values are available. Nevertheless, these estimates are useful to the business and economic community. They are the result of disaggregating more comprehensive data for the nation as a whole. Fracturing national data sets to regions, to states, and finally to counties can diminish the accuracy of the final product.

	Total Personal Income			Per Capita Personal Income	
	($ million)	Farm (%)	Nonfarm (%)	Amount ($)	Rank (No.)
United States	4,053,282.0	1.1	98.9	16,490	-
Nebraska	23,700.7	7.8	92.2	14,793	-
NE-Nonmetro	14,833.4	12.1	87.9	13,866	-
NE-Metro	8,867.3	0.5	99.5	15,815	-
Adams	464.8	9.2	90.8	15,294	23
Antelope	100.0	23.3	76.7	11,934	85
Arthur	8.3	40.3	59.7	17,597	7
Banner	15.0	56.0	44.0	15,398	20
Blaine	9.1	36.1	63.9	12,553	79
Boone	89.0	22.1	77.9	12,801	72
Box Butte	217.4	21.0	79.0	15,496	19
Boyd	35.3	14.6	85.4	11,343	88
Brown	55.0	26.6	73.4	14,095	45
Buffalo	485.8	7.6	92.4	13,128	68
Burt	121.0	26.7	73.3	14,570	32
Butler	132.1	20.3	79.7	14,592	31
Cass	291.0	5.5	94.5	13,141	67
Cedar	118.6	15.5	84.5	11,087	90
Chase	73.1	35.8	64.2	15,969	14
Cherry	83.0	22.7	77.3	12,777	74
Cheyenne	155.8	17.6	82.4	15,530	18
Clay	119.2	28.5	71.5	15,763	16
Colfax	116.5	6.6	93.4	12,690	75
Cuming	148.7	14.2	85.8	13,577	55
Custer	183.4	21.5	78.5	14,313	40
Dakota	220.0	3.7	96.3	12,789	73
Dawes	116.2	11.0	89.0	12,672	76
Dawson	275.2	13.3	86.7	13,290	62
Deuel	38.6	28.0	72.0	16,835	11
Dixon	78.4	13.8	86.2	11,833	86
Dodge	478.3	4.5	95.5	13,512	56
Douglas	7,010.3	0.1	99.9	16,716	13
Dundy	58.0	43.6	56.4	21,671	3
Fillmore	135.8	26.1	73.9	18,435	5
Franklin	57.1	26.1	73.9	14,365	37
Frontier	48.1	27.0	73.0	14,318	39
Furnas	88.1	17.3	82.7	14,997	28
Gage	317.8	7.7	92.3	13,720	52
Garden	49.4	42.7	57.3	18,233	6
Garfield	25.9	15.7	84.3	12,080	83
Gosper	34.8	39.8	60.2	16,806	12
Grant	11.4	21.8	78.2	14,072	47
Greeley	45.2	36.1	63.9	14,263	41
Hall	683.6	5.5	94.5	14,074	46
Hamilton	137.5	27.8	72.2	15,196	25
Harlan	52.6	23.3	76.7	13,151	66
Hayes	24.3	62.8	37.2	19,521	4
Hitchcock	55.2	21.7	78.3	14,223	42
Holt	171.7	24.7	75.3	13,099	69
Hooker	11.0	15.2	84.8	10,852	91
Howard	77.5	17.8	82.2	12,109	82
Jefferson	132.3	15.2	84.8	14,469	36
Johnson	62.1	13.8	86.2	12,847	71
Kearney	105.9	28.2	71.8	15,845	15
Keith	132.9	20.5	79.5	15,248	24
Keya Paha	16.7	53.0	47.0	14,784	30
Kimball	77.2	26.4	73.6	17,155	10
Knox	111.4	12.0	88.0	10,480	92
Lancaster	2,509.2	0.5	99.5	15,078	26
Lincoln	470.3	9.3	90.7	13,963	48
Logan	15.3	44.6	55.4	15,564	17
Loup	9.2	42.4	57.6	11,465	87
McPherson	8.5	52.2	47.8	15,355	21
Madison	433.0	5.2	94.8	13,396	58
Merrick	112.1	21.6	78.4	13,205	65
Morrill	81.9	30.9	69.1	14,329	38
Nance	57.0	20.6	79.4	12,998	70
Nemaha	115.8	12.5	87.5	13,889	49
Nuckolls	82.4	16.8	83.2	13,208	64
Otoe	192.5	9.3	90.7	13,269	63
Pawnee	44.3	16.0	84.0	12,487	80
Perkins	85.6	50.1	49.9	23,978	2
Phelps	170.9	21.5	78.5	17,376	9
Pierce	113.6	22.9	77.1	13,502	57
Platte	414.7	7.7	92.3	13,654	53
Polk	89.1	26.9	73.1	15,040	27
Red Willow	168.9	9.1	90.9	13,395	59
Richardson	138.9	14.9	85.1	13,625	54
Rock	30.1	33.8	66.2	13,823	50
Saline	183.6	12.7	87.3	14,193	44
Sarpy	1,396.9	0.2	99.8	14,221	43
Saunders	248.5	13.6	86.4	13,293	61
Scotts Bluff	495.1	8.0	92.0	13,334	60
Seward	201.7	8.5	91.5	12,659	77
Sheridan	106.5	27.6	72.4	14,566	34
Sherman	47.8	32.8	67.2	12,387	81
Sioux	28.5	47.0	53.0	17,567	8
Stanton	79.4	11.7	88.3	12,036	84
Thayer	102.7	22.0	78.0	14,568	33
Thomas	11.7	18.6	81.4	12,579	78
Thurston	62.8	7.1	92.9	8,902	93
Valley	77.3	22.9	77.1	13,785	51
Washington	240.1	10.2	89.8	14,986	29
Wayne	109.9	8.5	91.5	11,251	89
Webster	65.5	30.6	69.4	14,478	35
Wheeler	28.3	76.7	23.3	28,917	1
York	227.4	15.5	84.5	15,300	22

Merlin W. Erickson

Review and Outlook

John S. Austin, Research Associate, UNL Bureau of Business Research

National Outlook

Recent events in the Middle East have caused great concern about future shortages of world oil supplies. Incidents such as these are unstable and make long-term speculation difficult. Although we are on pins and needles awaiting possible future military actions, we should be similarly uncomfortable with the long-term economic consequences of the Iraqi actions.

The U.S. depends on imports for 45 percent of its petroleum products. Iraq and Kuwait account for 9 percent of these imports. The important focus is the world market for oil rather than the particular supplier of oil. Price impacts would be the same if we never imported another barrel of Iraqi crude. The critical question is whether the interruptions will be long term or short term.

Following the invasion, there has been a short-term jump of crude oil prices. At this writing, crude prices still are skyrocketing. Gasoline prices at the pump in the U.S. also have increased sharply. Those increases occurred even though current supplies of gasoline for most of the nation are adequate.

It is everyone's hope that the interruption will be short term. It is possible that the Saudis and a few other OPEC members could make up the difference in supply by pumping more oil.

It is also possible that the interruption could be long term. Long-term interruptions have different policy implications. Even prior to the Iraqi invasion, the U.S. economy was in a fragile condition. We had described it as a plateau economy. In such a state, an external shock to the system could bring a recession.

The dilemma faced by the Federal Reserve is whether to increase the money supply and drive down interest rates to keep the economy from a recession or to cut the money supply and drive up interest rates in order to curb the impact of inflation from an oil shortage.

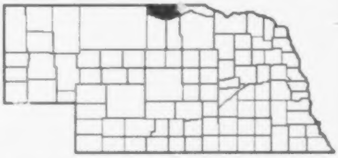
The policy that should be pursued depends on whether the interruption is short term or long term. If the interruption is short term, then an increase in the money supply followed by a decrease in interest rates would allow a price bubble to occur as the impact of a short-term oil interruption worked its way through the system. A short-term interruption would correct itself in a few months. But the Federal Reserve by increasing the money supply could ward off the real impact of a temporary oil shortage on the nation's economy.

If the interruption were long term, then an increase in money supply and a decrease in interest rates would validate the inflation brought by an energy shortage. Such a policy temporarily may solve real growth problems, only to be followed by runaway inflation and a deep recession.

What policy should be pursued over the next few months? For now, perhaps the best attitude is to wait and see what happens. This prescription implies that interest rates should be kept steady and some inflation would be allowed. An all-out fight against inflation would be unaccept-

County of the Month

Keya Paha



County Seat--Springview

License plate prefix number: 82
Size of county: 774 square miles, ranks 28th in the state
Population: 1,100 (estimated) in 1988, a change of -13.0 percent from 1980
Median age: 33.3 years in Keya Paha County, 29.7 years in Nebraska in 1980
Per capita personal income: $14,784 in 1988, ranks 30th in the state
Net taxable retail sales ($000): $2,832 in 1989, a change of +3.5 percent from 1988; $1,023 during January-April 1990, a change of +21.4 percent from the same period one year ago
Number of business and service establishments: 18 in 1987; 83.3 percent had less than five employees
Unemployment rate: 1.6 percent in Keya Paha County, 3.1 percent in Nebraska for 1989

Nonfarm employment (1989):

	State	Keya Paha County
Wage & salary workers	705,672	126
	(percent of total)	
Manufacturing	13.4%	--
Construction and Mining	3.6	*
TCU	6.5	*
Retail Trade	18.5	33.3 %
Wholesale Trade	7.6	0.8
FIRE	6.8	*
Services	23.7	*
Government	19.9	53.2
Total	100.0%	100.0%

Agriculture:

Number of farms: 259 in 1987, 269 in 1982
Average farm size: 1,833 acres in 1987
Market value of farm products sold: $18.6 million in 1987 ($71,772 average per farm)

*Data not available because of disclosure suppression
Sources: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, Nebraska Department of Labor, Nebraska Department of Revenue

Merlin W. Erickson

able, as would be an all-out fight against recession. The probable policy would be to allow some deterioration in the real sector in order to moderate inflation rates and stave off a long-term problem.

When I wrote the original draft of this Review and Outlook section, I thought the probability of a recession was moderate. At this point, I have to revise my estimate of the odds of a recession as being 50-50 or even higher. The task of steering a proper policy course through the morass of conflicting information and political pressures will be a difficult one indeed.

To monitor the direction the Federal Reserve chooses, keep a close eye on the federal funds rate. The Federal Reserve does not have to wait for the next formal Federal Open Market Committee (FOMC) meeting to change its policy. Policies can be changed by the simple expedient of a conference call among members.

If there is a sustained (in this case I would say three day) change in the federal funds rate, that should signal that the Federal Reserve has changed its policy. It is our hope that no radical solution will be taken, but that the Federal Reserve will continue to practice its gradualistic approach. American economic history is full of events when the Federal Reserve slammed on the brakes to curb inflation only to precipitate a recession. Moderate action is appropriate.

Turning to other economic news, the GNP in the second quarter of this year is estimated to have grown 1.2 percent. Just a few weeks prior to the announcement, a poll of a group of economists showed that they expected growth around 1.8 percent. While we know that the 1.2 percent figure will be revised several times in the next few months, it is still disappointing.

Weaknesses in the GNP were in the consumption of goods (both durable and nondurable), exports, and investment levels. The softness in consumer durables was expected, as second quarter auto sales were below year ago levels for virtually the entire quarter. The decrease in nondurables came as something of a surprise to many. That decrease came on the heels of a strong first quarter--the second quarter may have been an adjustment to more normal levels.

The consumption of services advanced rapidly in the second quarter, but that advance was not large enough to offset weaknesses in the consumption of goods. Consequently, real consumption as a whole fell marginally in the second quarter. The weakness reported in exports likely will be revised substantially in the near future. Unfortunately, it is difficult to say which direction the revisions may take.

Investment dropped in the second quarter for all major sectors except the inventories sector. The drop in consumer durables was accompanied by an increase in inventory accumulation. That strange pattern mirrored one found in the fourth quarter of last year. Then, as now, auto sales were weak, and auto inventories rose substantially. Those increased auto inventories helped to keep the fourth quarter numbers from becoming a disaster. The buildup of inventories in the fourth quarter was reduced in the first quarter.

Therein lies a potential difference with the figures we might see for the second quarter. The second quarter buildup has been related to an anticipated auto strike in October. Thus, the second quarter accumulation of inventories may not be sold until the fourth quarter. Unfortunately the auto industry has a history of building strike inventories and being hurt by such

Table I
Income and Earnings in Nebraska*
($ Millions)

	Second Quarter 1988	Third Quarter 1988	Fourth Quarter 1988	First Quarter 1989	Second Quarter 1989	Third Quarter 1989	Fourth Quarter 1989	First Quarter 1990	% Change 1989:IV versus Year Ago
Income									
Total Personal Income	24,320	23,057	24,055	24,822	24,769	24,278	25,049	26,165	5.4
Nonfarm	21,723	21,966	22,377	22,726	23,069	23,264	23,697	24,165	6.3
Farm	2,598	1,091	1,679	2,096	1,699	1,014	1,352	2,000	-4.6
Earnings by Industry**									
Ag. Services, Forestry & Fisheries	146	143	145	143	148	156	151	155	8.4
Mining	50	49	46	44	45	45	46	47	6.8
Construction	919	887	930	900	902	879	906	1,045	16.1
Manufacturing	2,377	2,407	2,425	2,475	2,485	2,488	2,488	2,523	1.9
Nondurable	1,180	1,196	1,199	1,207	1,233	1,245	1,236	1,225	1.5
Durable	1,197	1,212	1,226	1,268	1,252	1,243	1,252	1,298	2.4
TCU***	1,625	1,627	1,601	1,652	1,639	1,627	1,649	1,706	3.3
Wholesale Trade	1,240	1,269	1,287	1,298	1,316	1,330	1,350	1,374	5.9
Retail Trade	1,583	1,607	1,633	1,666	1,677	1,703	1,727	1,773	6.4
FIRE****	1,206	1,219	1,242	1,236	1,259	1,283	1,318	1,253	1.4
Services	3,520	3,603	3,692	3,781	3,874	3,994	4,102	4,224	11.7
Government	3,068	3,050	3,169	3,224	3,312	3,282	3,399	3,458	7.3
Federal, Civilian	476	480	492	509	513	522	524	539	5.9
Military	402	401	403	417	415	412	410	422	1.2
State and Local	2,190	2,170	2,274	2,298	2,384	2,348	2,465	2,497	8.7

* All data are seasonally adjusted at annual rates
** Earnings is the sum of wages and salaries, other labor income, and income earned by sole proprietors
*** Transportation, Communication, Utilities
**** Finance, Insurance, Real Estate
Source: Bureau of Economic Analysis, U.S. Department of Commerce

actions. If there is no strike in October, auto manufacturers may be stuck with inventories well beyond desired levels.

The second quarter report also shows an increase in government purchases of goods and services. These expenditures are related to the bailout of savings and loans. Estimates of the ultimate costs of the bailout keep changing. The most shocking number, the half trillion dollar estimate, is a gross figure before any recovery of asset value by the government.

Oil inventories hit an eight year high in June. Consequently, OPEC members agreed to raise prices in July. Their solution has been a unique one—they raised production quotas at the same time they attempted to raise prices. Their argument is that they are raising quotas so that everyone will stick to them. If observed by all members, the new production quotas would be below previous actual production. Unfortunately for OPEC, it has not been able to hold together on production quotas for a long time.

Recent hostilities in the Middle East will bring a short-term price increase. Wholesale oil prices already have increased. West Texas crude approached $18 per barrel earlier this year. After the OPEC announcements in July and before the invasion of Kuwait, prices had advanced to $20 per barrel. At this writing, prices are in the $24.50 per barrel area. Whether this increase is long term is problematical.

Similarly, gasoline prices had shot up in July due to shortages in the Northeast. Europeans normally are a big supplier to that market, but have cut sales due to increases in demand on the continent. August gasoline prices likely will be fairly high compared to the first half of the year.

These changes in energy prices will cause some future price problems. But they did not cause problems with the data in June. In June the Producer Price Index increased only 0.2 percent. Consumer prices increased 0.5 percent. The relatively moderate increases in prices coupled with low rates of economic growth have allowed the Federal Reserve to make a minor adjustment to monetary policy.

In mid-July the Fed dropped the key federal funds rate from 8.25 percent to 8.0 percent. It has held steady since that time. A lower nominal interest rate can stimulate the economy. Interest sensitive areas such as housing and the consumption of durables are likely to benefit from a sustained low interest rate policy. New home sales rebounded in June.

The elements of a plateau economy continue. Industrial production increased four-tenths of a percent in June, but second quarter GNP was weak. Unemployment remains healthy at a 5.2 percent level, and inflation is relatively low.

Nebraska Outlook

First quarter data for personal income in the state of Nebraska have been released by the Bureau of Economic Analysis (BEA) and are presented in Table I. Their data show a 5.4 percent gain overall for the state in its first quarter versus a year ago. That gain is well behind that of the United States as a whole which showed an increase of 6.9 percent.

Nor did Nebraska's gain meet that of some of the leading Plains states. Both Kansas and Minnesota had increases above 8 percent. Missouri's gain was a full percentage point above Nebraska's. Iowa matched our gain, and the Dakotas lagged behind the other Plains states.

Farm income was a retarding factor in the Nebraska income report. Farm income data still were showing gains from the 1988 drought that affected neighboring states more than it did our state. Consequently, 1988 and early 1989 farm income data for Nebraska were at fairly healthy levels. First quarter 1990 showed a decrease of 4.6 percent in farm income.

Nonfarm personal income increased 6.4 percent, only a half percentage point off the national average. Two of the strongest sectors in our state were construction and services. These sectors showed gains of 16.1 percent and 11.7 percent versus year ago levels. The gains in services are following long-term trends.

Table II
Employment in Nebraska

	Revised May 1990	Preliminary June 1990	June % Change vs. Year Ago
Place of Work			
Nonfarm	729,563	730,829	2.7
Manufacturing	95,875	96,725	1.8
Durables	46,850	47,013	0.0
Nondurables	49,025	49,712	3.6
Mining	1,629	1,713	6.3
Construction	25,565	26,428	4.6
TCU*	46,785	47,067	2.6
Trade	186,516	186,617	1.1
Wholesale	55,490	55,589	2.8
Retail	131,026	131,028	0.4
FIRE**	48,338	48,616	0.9
Services	174,422	174,651	3.7
Government	150,433	149,012	4.9
Place of Residence			
Civilian Labor Force	846,012	858,155	5.2
Unemployment Rate	2.0%	2.0%	

* Transportation, Communication, and Utilities
**Finance, Insurance, and Real Estate

Source: Nebraska Department of Labor

Table III
Price Indices

	June 1990	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U* (1982-84 = 100)			
All Items	129.9	4.7	4.9
Commodities	121.6	3.8	4.5
Services	138.8	5.5	5.2
Producer Price Index (1982 = 100)			
Finished Goods	117.9	3.3	4.2
Intermediate Materials	112.9	0.3	0.9
Crude Materials	101.0	-2.8	1.2
Ag Prices Received (1977 = 100)			
Nebraska	166	6.4	3.3
Crops	133	-3.6	-7.6
Livestock	187	12.0	8.7
United States	152	3.4	2.7
Crops	130	-5.8	-4.9
Livestock	172	9.6	8.8

U* = All urban consumers
Sources: U.S. Bureau of Labor Statistics, Nebraska Department of Agriculture

The construction numbers are not a surprise, given what we have been reporting from the F.W. Dodge data. The gains in the first quarter data could have been even stronger than those shown in Table I had they fully reflected the Dodge data. Employment numbers have not caught up with the gains in the construction area.

It is frustrating that there are so many different sources of information on construction, but that none of them seem to parallel one another. Anecdotal evidence indicates that the metro areas of the state are doing well in the construction activity. Given the geographic dispersion of the nonmetro part of the state, it is difficult to make generalizations.

There are pockets of progress in construction, such as the Lexington area where a major plant is being renovated. Furthermore, in some of our smaller communities, an addition to a high school or hospital will appear as a major leap in construction activity.

The growth in the first quarter has been reinforced by our own retail sales data. The gain in Nebraska net taxable retail sales was 8.2 percent versus a year ago. That would translate to approximately a 2.8 percent gain in real retail sales—a healthy gain by today's standards.

Although the nation had substantial improvement in first quarter auto sales, Nebraska's motor vehicle sales advanced 7.2 percent over last year, slightly behind the overall retail sales gain.

In more recent data, the rapid advance in retail sales slowed in April. Before we say that the sky is falling, note that the 1989 second quarter sales level was the high point of last year, both in current and real dollar increases (Figure II). Any gain

(continued on page 12)

Correction for Broken Bow

The extremely large building activity numbers reported for Broken Bow in the July issue were suspicious at the time. After some further checking, a mistake was discovered in our recording of the data. The data have been corrected for this issue. Broken Bow's building activity still is at high levels, but not the astronomical levels reported in the July issue.

We apologize for the mistake, especially to our readers from the Broken Bow area.

JSA

Table IV
City Business Indicators
April 1990 Percent Change from Year Ago

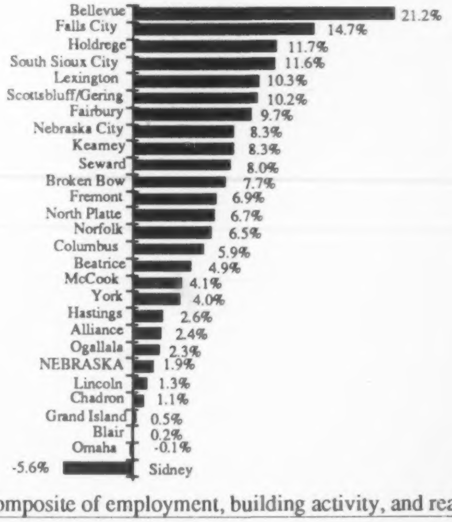
The State and Its Trading Centers	Employment (1)	Building Activity (2)
NEBRASKA	4.0	12.0
Alliance	1.9	-38.0
Beatrice	2.6	31.7
Bellevue	2.3	8.1
Blair	2.3	-68.4
Broken Bow	1.8	415.3
Chadron	8.1	-70.4
Columbus	5.4	14.6
Fairbury	0.4	242.1
Falls City	6.6	17.9
Fremont	5.3	100.0
Grand Island	3.7	6.0
Hastings	4.7	14.5
Holdrege	1.9	31.3
Kearney	4.8	297.2
Lexington	7.3	-15.9
Lincoln	4.0	5.8
McCook	1.6	73.4
Nebraska City	-2.1	199.6
Norfolk	7.9	20.8
North Platte	8.8	28.7
Ogallala	7.5	84.7
Omaha	2.3	15.0
Scottsbluff/Gering	2.4	-12.1
Seward	5.1	57.1
Sidney	4.2	-71.9
South Sioux City	2.0	-44.7
York	8.9	-2.2

(1)As a proxy for city employment, total employment (labor force basis) for the county in which a city is located is used

(2)Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes

Sources: Nebraska Department of Labor and reports from private and public agencies

Figure I
City Business Index
April 1990 Percent Change from Year Ago



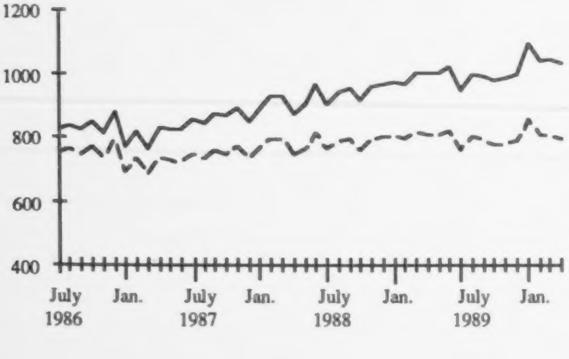
The index is a composite of employment, building activity, and real estate sales

Table V
Net Taxable Retail Sales of Nebraska Regions and Cities

Region Number and City (1)	City Sales (2) April 1990 (000s)	City Sales (2) % Change vs. Year Ago	Region Sales (2) April 1990 (000s)	Region Sales (2) % Change vs. Year Ago	YTD % Change vs. Year Ago
NEBRASKA	$876,547	3.0	$1,008,015	3.2	6.7
1 Omaha	301,656	-0.3	369,802	-1.6	5.7
Bellevue	18,840	50.4	*	*	*
Blair	5,020	15.1	*	*	*
2 Lincoln	120,820	2.4	140,234	2.2	5.8
3 South Sioux City	5,978	35.9	8,162	24.9	28.7
4 Nebraska City	3,661	13.3	18,326	6.5	8.3
6 Fremont	16,628	7.0	20,403	5.6	8.3
West Point	3,047	4.9	*	*	*
7 Falls City	2,236	29.8	9,277	12.9	6.2
8 Seward	4,563	12.5	14,662	7.8	8.0
9 York	6,625	4.4	15,824	3.7	0.9
10 Columbus	15,475	10.6	28,563	8.8	7.2
11 Norfolk	19,195	9.0	35,549	8.1	5.6
Wayne	2,934	25.3	*	*	*
12 Grand Island	33,674	0.6	47,248	-0.1	5.3
13 Hastings	15,848	3.8	25,452	5.5	2.5
14 Beatrice	7,827	9.6	17,847	8.5	9.3
Fairbury	2,836	12.5	*	*	*
15 Kearney	19,470	3.0	28,417	5.2	2.6
16 Lexington	5,903	22.5	16,039	7.4	1.2
17 Holdrege	5,168	26.4	8,921	18.6	8.3
18 North Platte	15,853	7.7	20,065	8.2	9.0
19 Ogallala	5,233	-5.4	12,341	3.0	5.1
20 McCook	7,893	5.7	11,211	6.0	1.7
21 Sidney	3,695	0.8	7,532	2.4	2.1
Kimball	1,511	5.3	*	*	*
22 Scottsbluff/Gering	18,205	26.8	25,850	8.3	5.3
23 Alliance	5,594	13.1	13,542	9.9	2.5
Chadron	2,550	11.8	*	*	*
24 O'Neill	4,763	12.9	14,414	12.4	7.5
Valentine	2,407	13.1	*	*	*
25 Hartington	1,685	5.3	8,430	1.9	2.3
26 Broken Bow	3,624	1.6	12,196	0.5	1.2

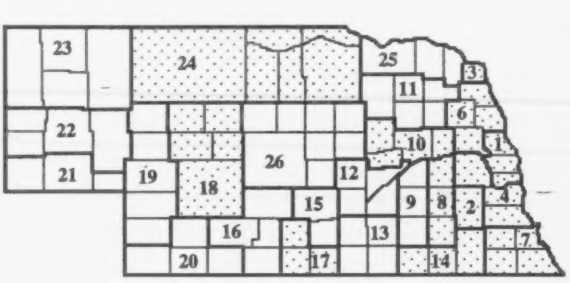
(1) See region map
(2) Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales
* Within an already designated region
Compiled from data provided by the Nebraska Department of Revenue

Figure II
Nebraska Net Taxable Retail Sales
(Seasonally Adjusted, $ Millions)



(1) The Consumer Price Index (1982-84 = 100) is used to deflate current dollars into constant dollars. Solid line indicates current dollars; broken line indicates constant dollars

Figure III
Region Sales Pattern
YTD as Percent Change from Year Ago



Shaded areas are those with sales gains above the state average. See Table V for corresponding regions and cities

Available soon from the Bureau of Business Research

1991 Annual Business and Economic Report for Nebraska

This publication is a must-have for everyone involved with the Nebraska economy--whether your business is large or small, rural or urban, established or just beginning, you will find a wealth of information in this volume that will help your business steer a course for the 1990s and beyond.

This new report features:

- Comprehensive business and economic information
- Historical economic data
- New trends and projections
- Analysis and interpretation of the data

A limited number of copies will be printed, so order now to reserve your copy.

Return this form with a check or money order to:

Bureau of Business Research
University of Nebraska-Lincoln
200 CBA
Lincoln, NE 68588-0406

Please send me the ***1991 Annual Business and Economic Report for Nebraska***. Enclosed is my check for $12.50 per copy.

______ # copies ordered $_______enclosed

NAME ....

COMPANY ....

ADDRESS ....

....

....

(continued from page 10)

above those levels is doing quite well.

We are showing an advance of 3.2 percent for April on a statewide basis (see Table V). On an accumulated basis, the gains this year have been 6.7 percent overall. In the first four months of the year, the Consumer Price Index advanced 4.7 percent versus its year ago level, implying that the gain so far this year in real net taxable retail sales has been about 2.0 percent.

Construction activity in the state has eased from its rapid pace in the first half of this year according to data from F.W. Dodge. In June there was a drop of 41 percent in the total value of contracts let. On a year-to-date basis, however, an 18 percent gain was shown for the first half of this year over last year. Residential construction is the slowest in the state.

Nevertheless, Nebraska is running counter to the United States, showing gains in new housing activity. We have shown a turnaround in apartment building construction that has not characterized any of the U.S. construction data so far.

Once again the problem in these comparisons goes back to the base year. June 1989 was an exceptional month for construction in the state, far ahead of its year ago values in June 1988. June 1990 shows a dip from the strength of previous months so far this year, but it certainly cannot be classified as a disaster. More data are needed to establish whether a trend has started. Year-to-date data still show positive increases and a relatively strong construction sector.

Nebraska continues to show exceptionally low unemployment rates. The 2.0 percent rate for the month of June was a low for the nation and contrasts to the U.S. number of 5.2 percent. Workforce data show an increase in jobs (not persons) of 2.7 percent versus a year ago. Nebraska continues to add jobs at a rapid pace, helping to keep unemployment at low levels.

If the national economy continues on its plateau, or worse, goes into an oil shock recession, then we can expect a leveling in Nebraska's job growth. If such a recession occurs, then it will be difficult to sustain the state's low unemployment rate.

Business in Nebraska
PREPARED BY BUREAU OF BUSINESS RESEARCH
Association for University Business & Economic Research

Business in Nebraska is issued as a public service and mailed free of charge upon request to 200 CBA, University of Nebraska-Lincoln, Lincoln, NE 68588-0406. Copyright 1990 by Bureau of Business Research, University of Nebraska-Lincoln. ISSN 0007-683X.

August 1990, Volume 45 No. 551

University of Nebraska-Lincoln-- Martin Massengale, *Chancellor*
College of Business Administration--Gary Schwendiman, *Dean*

Bureau of Business Research
F. Charles Lamphear, *Director*
Merlin W. Erickson, *Research Associate*
Margo Young, *Communications Associate*
John S. Austin, *Research Associate*
Barbara Sumsion, *Composing Technician*
Lisa Darlington, *Secretary*
Carol Boyd, *Secretary*
David DeFruiter, *Information Systems Coordinator*

The University of Nebraska-Lincoln does not discriminate in its academic, admission, or employment programs and abides by all federal regulations pertaining to same.

Nonprofit Org.
U. S. Postage
PAID
Lincoln, Nebraska
Permit No. 46

#A1128
SRI
CONGRESSIONAL INFORMATION SVC
4520 EAST/WEST HIGHWAY
BETHESDA, MD 20814

U7160-1

Business In Nebraska

September 1990
Vol. 46 No. 552

Prepared by the Bureau of Business Research
200 College of Business Administration
University of Nebraska-Lincoln
Lincoln, NE 68588-0406
402/472-2334

The 2 Percent Lid: Part I

F. Charles Lamphear

Director of the Bureau of Business Research and Karl H. Nelson Professorship of Economics

Introduction

In the November general election, Nebraska voters will have an opportunity to vote on Ed Jaksha's petition-initiated amendment to the state constitution that would place a 2 percent lid on government spending in Nebraska.

If passed, Nebraska's state and local governments could be required to function under an extremely restrictive budget and expenditure limitation formula.

This is the first of a two part series on the economic implications of the proposed 2 percent lid. The focus of this first part is what other states have done to limit taxes and expenditures.

The second part, which will appear in the October *Business in Nebraska*, will look at the longer-term effects of the proposed 2 percent lid on local subdivisions of government. In the second article, representative budgets for a local school district, a county, and a municipality will be subjected to the 2 percent lid to show how the lid may affect local services.

The proposed 2 percent lid would prohibit Nebraska (the Unicameral) and local governments from increasing local and state tax dollar spending by more than 2 percent each year. The 2 percent lid proposal makes no allowance or adjustment for inflation and economic growth. Any increase above 2 percent in tax revenues would be returned to the taxpayers during the next fiscal year and could not be used otherwise by the state or by subdivisions of government.

The proposed 2 percent lid has a provision to increase expenditures at the state level if four-fifths of the members of the legislature (or 40 senators) approve or, at the local level, if a special election were held. One legal opinion on the interpretation of "local government" is that it includes all cities, towns, villages, counties, school districts, educational service units, technical community colleges, and special districts such as airport authorities, hospital districts, sanitary improvement districts, etc. Nebraska has over 3,000 subdivisions of local government.

Nebraska Follows Nation

As a result of the distressed economic climate of high inflation, soaring housing costs, record interest rates, tax bracket creep, and falling real incomes of the late 1970s, a ground swell of discontent with, and even distrust of, government emerged. The University of Michigan's biennial national election survey showed that in 1978 only 30 percent of the public said they trusted the government in Washington to "do what is right" all or most of the time, compared to 76 percent in 1964. In the same period, the proportion of the public regarding most government officials as competent fell from 69 percent to 41 percent.

The rise in political mistrust was an across-the-board phenomenon in all de-

State Economic Scoreboard

Change from same month one year ago.

	State	Metro+	Nonmetro
Motor Vehicle Sales (May) Constant $	⇩ -6.5%	⇩ -9.2%	⇩ -3.9%
Nonmotor Vehicle Sales (May) Constant $	⇧ 1.4%	⇧ 0.9%	⇧ 1.9%
Building Activity (May) Constant $	⇧ 7.7%	⇧ 0.9%	⇧ 17.3%
Employment (July)	⇧ 6.3%	⇧ 4.8%	⇧ 7.9%
Unemployment Rate* (July)	⇩ 2.2%	⇩ 2.3%	⇩ 2.2%

+Omaha and Lincoln. *Unemployment is this month's rate, not a percent change from year ago.

Table 1
State Tax Revenues as a Percent of State Personal Income

	1980	1981	1982	1983	1984	1985	1986	1987
States With Tax and Expenditure Limitations								
Arizona	6.71%	6.30%	6.24%	6.29%	6.86%	7.19%	7.12%	7.16%
California	7.01	6.64	6.65	6.32	6.58	6.86	6.81	7.26
Colorado	4.83	4.08	4.35	4.22	4.74	4.81	4.75	4.99
Hawaii	9.71	9.84	9.09	8.93	9.16	9.34	9.53	10.00
Idaho	6.03	5.99	6.37	6.34	6.63	6.75	6.65	7.00
Louisiana	6.53	6.64	6.97	6.52	6.42	7.61	7.18	6.74
Michigan	6.32	6.17	6.23	6.54	7.26	6.82	6.88	6.96
Missouri	4.58	4.21	4.31	4.62	4.88	5.02	5.11	5.26
Montana	6.18	5.92	6.52	6.03	6.53	7.04	6.44	5.91
Nevada	5.15	4.92	6.80	6.72	6.79	6.82	7.01	6.86
Oregon	5.58	5.77	5.49	5.94	5.73	5.84	5.40	5.84
Rhode Island	6.09	6.08	6.33	6.34	6.47	6.48	6.22	6.85
South Carolina	7.05	6.84	6.98	6.96	7.12	7.63	7.57	7.68
Tennessee	5.10	4.79	4.99	4.91	4.99	5.58	5.69	5.76
Texas	4.81	4.98	5.06	4.77	4.78	5.23	4.94	4.82
Washington	6.54	6.34	6.86	7.68	7.78	7.40	7.87	7.97
Subtotal	6.14%	5.93%	6.04%	5.94%	6.18%	6.41%	6.36%	6.55%
States Without Tax and Expenditure Limitations								
Alabama	6.17%	6.46%	6.30%	6.31%	6.70%	6.79%	6.55%	6.61%
Arkansas	6.78	6.20	6.36	6.32	6.61	7.03	6.99	6.87
Connecticut	4.88	4.93	5.17	5.22	5.73	6.05	6.15	6.38
Delaware	8.45	8.29	8.25	8.28	8.49	8.98	8.99	8.75
Florida	5.00	4.82	4.69	4.76	5.09	5.26	5.33	5.25
Georgia	5.95	5.82	5.88	5.72	5.74	6.00	5.99	5.98
Illinois	5.70	5.34	5.24	5.02	5.39	5.43	5.47	5.48
Indiana	5.31	5.06	5.43	5.41	6.22	6.34	6.17	6.20
Iowa	6.28	5.82	6.32	6.34	6.45	6.37	6.47	6.60
Kansas	5.39	5.20	5.07	5.31	5.63	5.66	5.36	5.57
Kentucky	7.30	6.99	7.27	7.36	7.22	7.50	7.66	7.83
Maine	6.68	6.59	6.70	6.62	7.12	7.26	7.31	7.78
Maryland	6.04	5.80	5.87	5.91	6.11	6.16	6.18	6.33
Massachusetts	6.44	6.39	6.56	6.49	6.62	6.97	7.45	7.55
Minnesota	7.79	7.44	7.96	8.63	9.09	8.82	7.75	8.20
Mississippi	7.18	7.15	7.11	7.17	7.51	7.50	7.56	7.19
Nebraska	5.59	4.77	4.89	5.49	5.40	4.99	5.16	5.27
New Hampshire	2.95	2.64	2.96	2.68	3.08	2.82	2.87	3.03
New Jersey	4.99	5.28	5.37	5.45	5.77	5.79	5.83	6.08
New Mexico	8.65	9.78	9.42	8.44	9.19	8.86	8.63	8.84
New York	6.75	6.65	6.91	6.74	7.14	7.38	7.60	7.69
North Carolina	6.81	6.48	6.78	6.63	6.83	7.12	7.09	7.30
North Dakota	6.64	6.72	7.52	7.15	8.63	8.48	7.30	6.56
Ohio	4.54	4.60	4.94	5.43	5.93	6.09	6.08	6.17
Oklahoma	6.21	6.73	7.39	7.10	6.85	7.42	7.31	6.50
Pennsylvania	6.16	5.88	6.02	5.93	6.34	6.31	6.29	6.27
South Dakota	4.75	4.64	4.98	4.79	4.78	4.55	4.83	4.67
Utah	6.70	6.48	6.74	6.49	7.28	7.56	7.47	7.53
Vermont	6.05	5.94	6.30	6.40	6.73	6.91	6.92	6.85
Virginia	5.20	5.11	5.07	5.13	5.32	5.42	5.42	5.67
West Virginia	7.89	7.59	8.31	8.21	9.06	9.49	9.11	8.75
Wisconsin	7.25	7.25	7.48	7.81	8.54	8.05	8.25	8.01
Wyoming	7.21	7.69	12.20	12.03	12.75	12.33	12.32	10.13
Subtotal	6.00%	5.88%	6.06%	6.06%	6.41%	6.51%	6.52%	6.57%
49 State Total	6.05%	5.90%	6.05%	6.01%	6.32%	6.47%	6.46%	6.56%

Source: National Association of State Budget Officers, *State Tax and Expenditure Limitations: There is No Story*, December 1988 mographic, partisan, and ideological subgroups of society. The discontent and distrust eventually were channeled into efforts to limit the power of state and local governments to tax and spend.

One of the most publicized movements was Proposition 13 (the Jarvis-Gann amendment) that was passed by California voters in June 1978 by a two-to-one margin. (California voters subsequently relaxed the limitation in June 1990, allowing increases in proportion to changes in personal income.)

Setting Limits on Government

State Limits

As early as 1983, 17 states had adopted some form of a tax or expenditure limit. Massachusetts and New Mexico adopted expenditure limitation measures in 1986 and 1987, respectively, bringing the total number of states with tax or expenditure limitation provisions to 19 by 1988.

For 12 of these 19 states, the tax and spending limitations placed on state government are tied to growth in state personal income. Most states use the variable formula method to control state government.

The variable formula method permits state and local governments to meet the increased demand for public services that generally accompanies growth in economic activity and/or population. Conversely, with the variable formula method, government expenditures contract if economic activity declines or if population drops within the area governed.

In contrast to the variable formula is the fixed number method. The fixed number method imposes an inflexible lid on government expenditures. The lid is independent of changes in demand for government services. The 2 percent lid proposed for Nebraska is a form of the fixed number method.

One great disadvantage of this method is that it inadvertently can limit a state's overall economic growth. In extreme instances, the fixed number method can trigger a localized recession. That unintended outcome is more likely to occur during times when the inflation rate exceeds the fixed formula rate or when an area is experiencing significant economic growth during a rapid gain in population.

Most states probably have chosen the variable formula method in an effort to restrict the growth of the public sector without impairing growth in the private sector. The variable formula method avoids the arbitrary limits on economic growth imposed by the fixed number method. As earlier noted, California now has gone to the variable formula method as a way to limit government expenditures.

Analysis of State Limitations

When budgets and expenditures are severely limited and the quantity of services needs to be reduced, a logical question is whether the cuts should be selective or across the board. Apart from mandated programs, cutting across the board by a uniform fraction implies that all programs are equally beneficial.

This is a proposition economists and public policy analysts find highly implausible. They would argue, instead, for selective or differential cuts of programs offering the lowest marginal benefits.

Political realities, however, make it difficult for elected public officials to be selective about reductions in spending. Every program has its constituency and its organized body of supporters. Budget-cutting is never easy, but a plan to cut all departments or programs about the same fraction (on the principle of sharing the misery) is likely to meet the least resistance.

Most state taxation and spending limitations have been initiated by legislatures. Apparently legislatures sensed the public's growing discontent with government and placed limits on the growth of government spending, while maintaining some flexibility in the government's ability to respond to changes in demand for services.

One might think that the states that have adopted tax and spending limitations are the high tax states. One way to measure a state's relative tax level (or tax burden) is to compute the ratio of state general fund expenditures to state personal income. Table 1 presents the results of that computation for 49 of the 50 states.

Table 1 is divided into two groups or categories—states that have adopted tax and expenditure limitations and states that had not adopted tax and expenditure limitations prior to 1988. Alaska was excluded because of its unique fluctuations in revenues and expenditures.

The most striking conclusion that can be drawn from Table 1 is found in a comparison between the states with limits and the states without tax or spending limitations. The ratio of state tax revenues to state personal income for the group of states with limits overall is not noticeably different from the ratio for the group without such limits. The same conclusion can be drawn from a comparison of the ratio of state general fund expenditures to state personal income for the two groups (not shown in Table 1).

From these calculations, it appears that the revenue and expenditure patterns of states that are not controlled by taxation and spending limitations are not much different from the patterns of states that are controlled by taxation and spending limitations.

It may be that the overall condition of state economies and the structure of state taxing systems, combined with the sensitivity of policy makers to antitax sentiment, have done more to limit state spending than have lids and other restrictions.

Limits on Subdivisions

Most tax and spending limitations have been placed on subdivisions of state government. By January 1989, 43 states had some type of limit on local government expenditures or taxes. (See Table 2.)

Table 2 shows the types of limitations by state and distinguishes between six major types of limits on taxes and expenditures. These types are:

- Tax rate limits
- Revenue limits
- Property tax rollbacks
- Spending limits
- Assessment limits
- Truth-in-taxation (or full disclosure) provisions.

(See box on page 5 for more detailed definitions of the various types of limitations on taxes and expenditures.)

Table 2 yields several general conclusions and observations.

1. Forty-three states have limits on local government expenditures or taxes;

2. A limit on property tax rates is the most common type of limitation. Thirty states have this type of limit;

3. Limitation on property tax revenue is the next most common form of restriction;

4. Only three states—Arizona, California, and New Jersey—have some form of limit on spending increases;

Table 2
Restrictions on Local Government Tax and Expenditure Powers

State	No Limits	Property Tax Rate Limits	Property Tax Revenue Limits	Revenue Rollbacks	General Revenue Limits 1984	Expenditure Limits	Limits on Assessment	Full Disclosure
Alabama		X						
Alaska		X	X					
Arizona			X			X	X	
Arkansas		X		X				
California		X				X	X	
Colorado			X					X
Connecticut	X							
Delaware				X				C
Florida		X		X				X
Georgia	X							
Hawaii								X
Idaho		X	X					
Illinois		X	X					X
Indiana			X					
Iowa		X					X	X
Kansas				X				
Kentucky		X		X				X
Louisiana		X		X				
Maine	X							
Maryland							X	X
Massachusetts		X	X					
Michigan		X		X				X
Minnesota		X			X			X
Mississippi		X	X					
Missouri		X		X				
Montana		X		X				M
Nebraska		X						
Nevada			X		X			
New Hampshire	X							
New Jersey			C			M		
New Mexico		X	X				X	
New York		X					X*	
North Carolina		X						
North Dakota		X	X					
Ohio		X		X				
Oklahoma		X						
Oregon			X					
Pennsylvania		X						
Rhode Island			M					X
South Dakota		X						
South Carolina	X							
Tennessee								X
Vermont	X							
Virginia				X				X
Texas		X		X				X
Utah		X						X
Washington		X	X					
West Virginia		X						
Wisconsin	X							
Wyoming		X						
U.S. Total	7	30	15	12	2	3	6	16

C: counties only; M: municipalities only; *selected cities only. Source: NCSL survey of legislative fiscal officers, municipal leagues, and associations of counties, August 1988

5. Only two states have a general revenue limit;
6. Six states limit assessment increases;
7. Sixteen states have full disclosure or truth-in-taxation provisions in effect;
8. Most states limit local governments by more than one method; and
9. Nebraska already has a property tax limitation measure similar to what other states in the Plains region have adopted, which is a mill levy on municipalities.

Common Forms of Tax and Expenditure Limits

A **tax rate limit** (or a **millage limit**) restricts the millage rate or nominal tax rate; that is, the amount of property tax that may be imposed per dollar of assessed valuation.

A **revenue limit** restricts the percentage increase of revenue from one year to the next. It usually applies to property tax revenue, but it also may apply to other kinds of revenue.

A **revenue rollback limit** goes into effect only when property is revalued. It requires that the tax rate be reduced, usually to prevent any increase in revenues.

A **spending limit** or **expenditure limit** sets a maximum on the percentage increase in local spending from one year to the next.

An **assessment limit** restricts the percentage increase of the assessed valuation of existing property. Assessment limits may not actually restrict local revenue.

A **truth-in-taxation limit** (or **full disclosure**) requires special notification to taxpayers of proposed tax increases through advertisements and/or the mail as well as special public hearings.

Restrictiveness of Tax and Expenditure Limitations

The purpose of a lid is to restrict state and local government to some publicly acceptable level of spending and taxation. This raises an important question: Are some limits more restrictive than others?

The level of restrictiveness depends on the design features of the spending lid. For evaluation purposes, design features can be classified under four headings: 1. the permissible level of growth of taxes or spending, 2. exemptions, 3. override provisions, and 4. the degree of detail incorporated in the limit.

A variable formula method is less restrictive than a fixed number method. In the fixed number method, a 2 percent lid is more restrictive than a 5 percent lid. The proposed 2 percent lid for Nebraska is a fixed number method of controlling government budgets and expenditures.

Public expenditures regarded as relatively uncontrollable frequently are exempted from a limit. Debt service, for example, typically is exempt from the limit. If debt service is not exempt, the ability of the local government to pay its bonds may be impaired, which may not only interfere with a government's ability to finance itself, but also reduce its bond rating and increase interest expenses.

In some cases, certain social service costs are exempt because they result from mandates imposed by higher levels of government; examples are special education programs, unemployment, and welfare benefits. It appears that the language used in the proposed 2 percent (fixed number) lid for Nebraska does not permit exemptions of the kind indicated here.

Another factor influencing the restrictiveness of a limit is the provision for overriding it. At one extreme, no override is permitted. Many states that have enacted spending limitations allow a majority of local voters to override a limit. The proposed 2 percent lid for Nebraska does permit overrides—an override by four-fifths of the members of the state legislature for state budgets and majority voter approval for an override at special elections for subdivisions.

One other feature of overrides is the number of years that the limit may be suspended by a single override referendum. The most restrictive practice is to require annual renewal of the override. The proposed lid for Nebraska requires annual renewal of the override.

The degree of detail incorporated into a limitation also is important in determining how restrictive it is. One objective measure of the degree of detail is the number of local units of government that are affected by the spending limitation. As noted earlier, one legal interpretation of the proposed 2 percent lid for Nebraska is that the lid covers state government and all subdivisions of government. As indicated earlier, there are over 3,000 subdivisions of government in Nebraska.

Summary

On the basis of the four restrictions discussed in the previous section and the language contained in the proposed 2 percent lid amendment, it is reasonable to state that Nebraskans will be voting this November on an extremely restrictive lid to control government spending.

Professor Bruce Johnson of UNL's Department of Agricultural Economics noted in the March 1990 issue of *Business in Nebraska* that ". . . we must approach tax issues and fiscal policy with a new mindset. Rather than reactive or crisis management, we need to assume a proactive style of decision making. Proactive decision making means seeing the longer run, not just the short run; it means understanding the total system, not just a specific component; it means considering broader societal interest, not just individual interest." Professor Johnson's advice is worthy of much consideration.

The second part of this series on the 2 percent lid will look at the longer-run effects of a 2 percent (fixed number) lid by applying the lid to representative budgets of several governmental subdivisions. Specifically, the lid will be applied to a budget of a typical local school district, an average county budget, and municipal budget from a representative Nebraska town to analyze how the lid may affect local services.

Nursing Homes in Nebraska

James Creigh

Undergraduate Research Associate 1989/1990

Nebraskans likely will face a severe shortage of nursing home services in the near future. This shortage may be acute for many rural areas of the state. This looming shortage reflects both supply and demand conditions within the industry.

Supply of nursing home services soon will be reduced due to new federal Medicaid regulations mandated by the Omnibus Budget Reconciliation Act (OBRA) of 1987. This legislation replaced a two tier nursing standard for nursing homes receiving Medicaid funds with a single standard nursing staff requirement. These regulations go into effect October 1, 1990.

Under current legislation, nursing homes receiving Medicaid funds may be certified as either skilled nursing facilities (SNF) or intermediate care facilities (ICF). SNF homes must have at least one nurse on duty at all times. Nurses may be either registered nurses (RNs) or licensed practical nurses (LPNs). ICF homes, however, are required only to have nurses on duty eight hours per day, five days per week. ICF homes are required to have nursing care available 24 hours per day, with such care usually provided by nurses aides.

Under the 1987 OBRA regulations, the ICF classification will be eliminated. ICF homes will have to upgrade their services to the higher SNF standard to be eligible for Medicaid funds. Nursing homes receive such a high proportion of their funding from Medicaid that the option to refuse Medicaid funds is not realistic.

The OBRA regulations will create a huge demand for nurses. Many homes, however, may not be able to fill the new nursing positions. Those homes that cannot fill nursing positions face losing their Medicaid eligibility.

Nebraska nursing homes already are facing staff shortages. It is estimated that Nebraska nursing homes currently cannot fill 450 nursing positions (both RN and LPN spots). These 450 positions represent 20 percent of the total nursing positions in Nebraska nursing homes.

One estimate predicts that full implementation of the OBRA requirements would create 400 additional nursing positions in Nebraska nursing homes, bringing the total shortfall to about 40 percent.

A large increase in demand for nursing home services will create an additional 1000 positions over the next 30 years.

Nursing homes face difficulties in filling nursing positions not encountered by either hospitals or doctors' offices. Hospitals and doctors' offices are able to fill nursing positions more easily than nursing homes because hospital and office work often is seen as more challenging, glamorous, or economically rewarding. Nursing homes often are able to recruit from only the small pool of nurses who are dedicated to nursing home care or who have not accepted jobs in hospitals or doctors' offices.

Rural homes face an additional obstacle in recruiting nurses. Rural homes generally cannot match the salaries offered in urban centers. Also, younger nurses often prefer to live in more urban areas. Thus, rural nursing homes face two hurdles in recruiting nurses—that of being a nursing home (rather than a hospital or doctor's office) and that of a rural location.

While supply of nursing home services is about to contract, demand for these services will continue to increase. The most rapidly growing age groups are the old. In the longer run, the baby boom generation will begin to demand significant quantities of nursing home care in about 20 years.

Historical statistics indicate that of Nebraska males between the ages of 65 and 74, 1.3 percent require nursing home care; between the ages of 75 and 84, 5.67 percent require nursing home services; and of those over age 85, 22 percent require nursing home services. For Nebraska females between the ages of 65 and 74, 1.9 percent require nursing home care; between the ages of 75 and 84, 8.54 percent require nursing home care; and for those over age 85, 31.8 percent need nursing home care.

The total population of nursing homes is predicted to rise from 15,316 in 1985 to 23,000 in 2020, as shown in Table 1. Thus, we face a 50 percent increase in nursing home demand at a time when supply likely will shrink.

Table 1

Projected Nursing Home Residents in Nebraska

	65 and Older	85 and older
1985	15,316	8,003
1990	16,237	8,672
1995	17,327	9,635
2000	18,420	10,571
2005	19,421	11,468
2010	20,493	12,502
2015	21,608	13,147
2020	23,029	13,308
% Growth		
1985/2020	50.4%	66.3%

Source: Stephen R. Frederick and Kay L. Anderson, *Projections and Analysis of Nebraska's Elderly Population Through 2020* (Nebraska Department of Health)

The two trends of shrinking supply of nursing home services and increasing demand for these services implies that costs for these services will increase. Direct nursing costs account for over half of nursing home expenses. The severe nursing shortage, especially among nursing homes, and the resulting rise in nursing costs will impact overall nursing home costs significantly.

If the new nursing regulations mandated by the OBRA are enacted as written, nursing home consolidations may be necessary to control costs, especially in rural areas. Nursing homes have a threshold efficiency size generally larger than most rural towns could support. For instance, one nurse may be able to care for ten residents as efficiently as for two residents. Rural nursing homes may be able to reach this threshold size by combining with other nursing homes.

Consolidations, however, will mean that nursing home residents may be forced to live farther away from family and friends than is currently common. Future nursing home residents may not be able to reside in their home towns, but may be forced to live several miles away by the restrictions imposed by nursing home economics.

James Creigh graduated with honors in May of this year with a double major in economics and history.

Review and Outlook

John S. Austin, Research Associate
UNL Bureau of Business Research

National Outlook

Recession Woes

One of the current major concerns is that we may talk ourselves into a recession. Some analysts are saying that we are already in a recession, although evidence of a recession simply does not exist. The economy is definitely weak, but we cannot say with certainty that a recession has started.

The likelihood of a recession has increased markedly from pre-Iraqi invasion times. We now face the possibility of a shock-induced recession—one where the curtailment of oil supplies will lead to a collapse of consumer and business confidence, a retrenchment of consumer expenditures, and a reduction both in business inventories and in plant and equipment investment.

The current situation is parallel to that of the early 1970s. In October 1973, some Arab members of OPEC embargoed oil deliveries to the United States. A recession began in November 1973, one month after the start of embargo. The U.S. economy continued to decrease until March 1975, when it reached its trough. Thus, it is reasonable for us to be concerned about the immediate impact of a partial cutoff of oil supplies.

Other parallels to the oil supply difficulties of the 1970s exist. In both cases, the economy had experienced a prolonged expansion. In the early 1970s, the economy had been in an expansion associated primarily with the continuation of the Vietnam conflict. The current expansion is the longest peacetime period of growth in our nation's history.

There are substantial differences, however, between the economy in 1973 and the economy in 1990. In the earlier period, inflation was rampant and a system of price controls had been implemented. We were in the midst of Phase IV of price controls when the Arab oil embargo hit.

The economy had reached an overheated state, and it took little to precipitate a major recession. The major difference today is the degree to which the economy is overheated. The distortional price pressures of 1973 are absent today. We should be concerned over a curtailment of oil supply and its impact on our nation's price system, however.

Fortunately, discussion of relief from other members of OPEC has begun. They can supply the shortfall of oil production lost from Iraq and Kuwait. At this writing, wholesale energy prices already have receded from their extreme highs.

Another difference is the degree of oil dependency. In the early 1970s, we relied on imports for approximately one-third of our petroleum product needs. Today that dependence is approaching 50 percent.

The primary question is the policy reaction evoked by the Middle East conflict. Fiscal policy will be oriented toward the military response to the Iraqis. To a lesser extent, there will be some concern over the issues regarding the federal deficit. I strongly suspect that the moves to cure the deficit problem will be ignored—only Band-Aid legislation will be enacted. Military spending is likely to increase in the near term. On the whole, we will find fiscal policy stimulating.

We have seen a short-term reaction to ease interest rates. The Federal Reserve dropped the federal funds rate from 8.25 percent to 8 percent. But the Fed is in a quandary. Part of their problem concerns the likely duration of the Middle East conflict.

If the conflict continues, there is a danger that the Fed will try to correct conflict-related price pressures single-handedly. If the Federal Reserve goes all out to fight forthcoming inflation, then we likely will have a recession. It is our hope that the Federal Reserve will steer a more middling

Table 1
National Indicators

	Annual		Quarterly (SAAR)			
	1988	1989	1989:III	1989:IV	1990:I	1990:II
Real GNP (% change)	4.5	2.5	1.7	0.3	1.7	1.2
Real Consumption (% change)	3.6	1.9	4.6	-0.8	1.1	0.3
Housing Starts (millions)	1.5	1.4	1.3	1.3	1.5	1.2
Auto Sales (millions)	10.6	9.9	10.8	8.7	9.7	9.5
Interest Rate (90 day T-bill)	6.7	8.1	7.8	7.6	7.8	7.8
Unemployment Rate (%)	5.5	5.3	5.3	5.3	5.3	5.3
Money Supply, M2 (% change)	5.1	3.7	6.9	7.0	6.0	2.9
Industrial Production Index (1987=100)	105.4	108.1	108.1	108.1	108.3	109.4

NOTE: SAAR—seasonally adjusted at annual rates
Source: Bureau of Economic Analysis

course and continue to practice gradualism in its monetary policy.

The key to how we will emerge from the Middle East crisis is its duration. There is no way to predict how long this crisis will continue. The indefinite duration also raises several issues that have no answers, unfortunately. Will the OPEC offset to the shortfall of Iraqi and Kuwaiti oil production be effective? Will it continue?

It looks like such assistance will occur. As we have mentioned, wholesale prices already have decreased. Retail prices at the pump have not yet responded. The major oil companies will have a severe public relations problem if they fail to respond promptly to a reduction in wholesale prices by lowering retail pump prices. After all, pump prices were quick to increase when wholesale prices rose. The public expects pump prices to fall when wholesale prices drop.

We also should look at the possibility of a recession not occurring. The economy is on a knife's edge, with extremely slow rates of growth.

Avoiding a recession requires that just the right economic policy be followed. The real impact of war efforts and attendant production responses may offset oil shock impacts. Avoiding a recession is all a matter of luck. The odds of no recession occurring are fairly low.

Economic forecasters are revising their outlooks. There is a disagreement on whether a recession looms in the near term, but there is a strong agreement that we are facing periods of slow growth. Some analysts observe that there is little difference between small positive growth and small negative growth. The economic result is nearly the same.

In a recent *Wall Street Journal* poll, forecasters revised their outlook for growth in the second half of this year to a miserly 0.3 percent. Growth in the first half of next year similarly was dropped to 1.0 percent. Those figures are both substantially lower than the pre-Middle East crisis numbers.

In other economic news, evidence of the weak economy continues. July retail sales increased only 0.1 percent. That figure is somewhat deceiving, as June sales were up a full 1.1 percent. Thus, July figures simply may be leveling.

Second quarter GNP figures were revised to an increase of 1.2 percent. Auto and truck production plans have been revised downward for the third quarter, and August auto sales are off from a year ago level. The unemployment rate crept up to 5.5 percent in July.

Some pre-oil crisis price figures were released for July. The Producer Price Index fell one tenth of a percent. The Consumer Price Index showed an increase of 0.4 percent. On a year-to-date basis, consumer prices have increased 5.8 percent. Neither of those figures incorporate any of the rapid increases in oil prices that we saw in August. The August Producer Price Index and Consumer Price Index will both show rapid increases.

Housing starts plummeted once again, reaching a total of 1.14 million in July. July totals were at the lowest level since September 1982.

Industrial production was dead flat in July versus June. On a year-to-date basis, July increased 1.9 percent. The Industrial Production Index is leveling after fairly reasonable increases in both May and June.

Perhaps one of the most promising pieces of information was an increase in personal income of 0.6 percent in July. The pre-Iraqi invasion figures for the economy nearly all show an economy in a fairly delicate state.

Nebraska Outlook

The USDA recently released forecasts for the nation's net farm income. The outlook for crop income is fairly positive at this time. Nebraska likely will share in good crop numbers in this year's harvests, although some parts of our state have had production difficulties. For example, moisture levels in western Nebraska are not back to normal. The USDA showed a

Table II
Employment in Nebraska

	Revised June 1990	Preliminary July 1990	July % Change vs. Year Ago
Place of Work			
Nonfarm	731,725	719,076	2.3
Manufacturing	96,875	95,777	0.8
Durables	47,121	46,235	0.8
Nondurables	49,754	49,542	2.4
Mining	1,705	1,757	3.8
Construction	26,455	26,968	4.3
TCU*	47,035	46,990	2.4
Trade	186,821	186,824	1.4
Wholesale	55,601	55,755	3.1
Retail	131,220	131,069	0.7
FIRE**	48,644	48,473	-0.9
Services	174,451	172,848	3.7
Government	149,739	139,439	3.7
Place of Residence			
Civilian Labor Force	858,463	863,173	5.4
Unemployment Rate	2.0%	2.2%	

* Transportation, Communication, and Utilities
**Finance, Insurance, and Real Estate

Source: Nebraska Department of Labor

Table III
Price Indices

	July 1990	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U* (1982-84 = 100)			
All Items	130.4	4.8	4.9
Commodities	121.6	3.9	4.4
Services	139.9	5.6	5.3
Producer Price Index (1982 = 100)			
Finished Goods	118.0	3.5	4.1
Intermediate Materials	113.0	0.4	0.9
Crude Materials	101.2	-2.4	0.7
Ag Index of Prices Received (1977 = 100)			
Nebraska	163	4.5	3.4
Crops	129	-5.8	-7.3
Livestock	185	10.1	8.7
United States	152	4.1	2.8
Crops	130	-3.0	-4.7
Livestock	173	10.2	9.0

U* = All urban consumers
Source: U.S. Bureau of Labor Statistics, Nebraska Department of Agriculture

small upward revision in fuel cost for 1990. In essence, the time for big fuel expenses has passed.

USDA's outlook for 1990 U.S. net farm income remains fairly optimistic, between $47 to $52 billion. Net farm income is the difference between receipts and outlays for the current year's production plus government payments.

The outlook for next year is not as good. The increase in oil prices, if sustained, will result in substantial increases in the cost of production. Not only will the cost of fuels rise, but many of the petrochemicals used in farming also will increase in price.

At the same time, there is no reason to forecast an increase in revenue from crops and livestock that will cover these increases in costs. This implies that farmers are in for a squeeze in net farm income next year. If Middle East problems continue, then next year's outlook for our nation's and Nebraska's farmers is less than optimistic.

Nebraska's construction continues to run counter to the U.S. trends. According to F.W. Dodge, after June showed a decrease from last year, July's value of contracts increased 52 percent ahead of a year ago. On a year-to-date basis, total building square footage has increased 25 percent. Although the nation's housing starts fell in July, Nebraska housing starts showed an increase of 25 percent on a year-to-date basis in July.

Retail sales were up 4.5 percent in May versus a year ago. That increase contrasts sharply with the small increase of 3.2 percent in June. Because of strong gains earlier in the year, year-to-date retail sales are 6.2 percent ahead of year ago levels.

Unemployment rates in Nebraska showed a slight increase to 2.2 percent in July. The number of jobs jumped 2.3 percent. A major decrease in state and local government employment occurred between June and July. The state and local government jobs reflect a loss of the gubernatorial reelection workers who were included in the June data.

There has been some discussion to the effect that Nebraska may be an economy that is recession proof. Unfortunately, that sentiment is largely just talk. In the previous national recession, the economy began to slow in early 1981 and did not recover until the end of 1982. Similarly, Nebraska

Table IV
City Business Indicators
May 1990 Percent Change from Year Ago

The State and Its Trading Centers	Employment (1)	Building Activity (2)
NEBRASKA	5.4	10.2
Alliance	4.1	-2.5
Beatrice	4.5	45.2
Bellevue	3.5	-33.2
Blair	3.5	-50.7
Broken Bow	4.0	824.1
Chadron	9.5	-72.5
Columbus	7.3	24.0
Fairbury	1.8	534.3
Falls City	8.8	13.5
Fremont	6.7	130.0
Grand Island	5.4	29.0
Hastings	6.4	1.5
Holdrege	3.9	19.5
Kearney	6.2	318.4
Lexington	9.6	-45.4
Lincoln	4.9	4.9
McCook	3.0	71.3
Nebraska City	-0.2	262.6
Norfolk	9.0	-5.2
North Platte	10.4	55.1
Ogallala	9.5	56.1
Omaha	3.5	5.5
Scottsbluff/Gering	3.6	-5.0
Seward	6.8	25.4
Sidney	6.6	-64.6
South Sioux City	2.3	-36.1
York	10.9	11.9

(1)As a proxy for city employment, total employment (labor force basis) for the county in which a city is located is used

(2)Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes

Sources: Nebraska Department of Labor and reports from private and public agencies

Figure I
City Business Index
May 1990 Percent Change from Year Ago

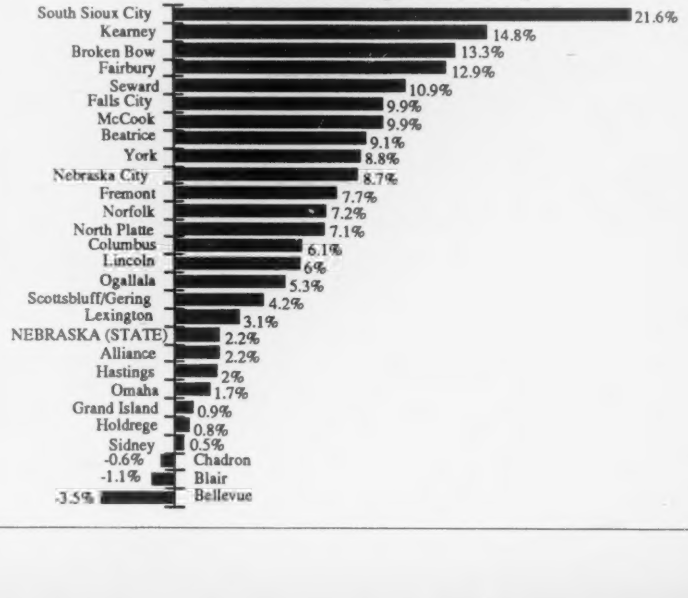
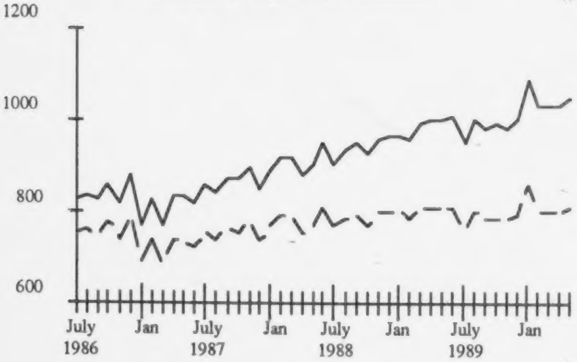


Table V
Net Taxable Retail Sales of Nebraska Regions and Cities

Region Number and City (1)	City Sales (2) May 1990 (000s)	City Sales (2) % Change vs. Year Ago	Region Sales (2) May 1990 (000s)	Region Sales (2) % Change vs. Year Ago	YTD % Change vs. Year Ago
NEBRASKA	$890,412	5.8	$1,037,699	4.5	6.2
1 Omaha	301,160	3.1	382,227	1.8	4.8
Bellevue	12,234	3.8	*	*	*
Blair	4,901	5.2	*	*	*
2 Lincoln	123,491	11.6	145,556	9.2	6.5
3 South Sioux City	7,034	56.2	9,159	38.1	30.8
4 Nebraska City	3,937	9.3	18,952	7.9	8.2
6 Fremont	16,734	5.0	30,985	5.0	7.6
West Point	3,128	21.3	*	*	*
7 Falls City	2,395	15.7	9,548	2.9	5.5
8 Seward	4,672	19.0	15,792	8.9	8.2
9 York	7,309	11.2	16,727	10.1	2.8
10 Columbus	15,932	7.6	28,367	4.2	6.6
11 Norfolk	20,202	11.4	36,566	7.8	6.1
Wayne	3,068	6.9	*	*	*
12 Grand Island	32,694	-3.0	47,499	-2.2	3.7
13 Hastings	15,557	1.3	25,395	-0.5	1.9
14 Beatrice	8,427	15.6	19,542	19.2	11.3
Fairbury	3,060	10.8	*	*	*
15 Kearney	20,828	15.3	29,567	12.4	4.7
16 Lexington	6,144	7.4	17,239	8.8	2.7
17 Holdrege	4,843	-0.8	8,746	-0.6	6.3
18 North Platte	15,830	4.1	20,293	2.5	7.6
19 Ogallala	6,038	1.0	12,867	-0.2	3.9
20 McCook	8,865	17.2	12,951	16.2	4.8
21 Sidney	4,044	9.4	8,093	2.9	2.2
Kimball	1,741	6.5	*	*	*
22 Scottsbluff/Gering	19,230	9.8	27,037	6.4	5.6
23 Alliance	5,558	4.6	14,233	1.3	2.2
Chadron	2,733	6.7	*	*	*
24 O'Neill	4,995	22.3	15,750	13.6	8.9
Valentine	2,733	13.3	*	*	*
25 Hartington	1,678	20.6	8,662	9.4	3.7
26 Broken Bow	3,645	5.1	12,395	8.2	2.6

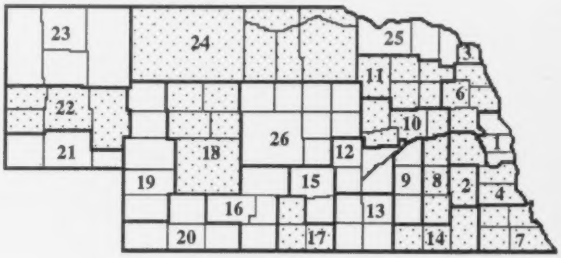
(1) See region map
(2) Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales
* Within an already designated region
Compiled from data provided by the Nebraska Department of Revenue

Figure II
Nebraska Net Taxable Retail Sales
(Seasonally Adjusted, $ Millions)



(1) The Consumer Price Index (1982-84 = 100) is used to deflate current dollars into constant dollars. Solid line indicates current dollars; broken line indicates constant dollars

Figure III
Region Sales Pattern
YTD as Percent Change from Year Ago



Shaded areas are those with sales gains above the state average. See Table V for corresponding regions and cities

Available Soon From the Bureau of Business Research

1991 Annual Business and Economic Report for Nebraska

This publication is a must-have for everyone involved with the Nebraska economy--whether your business is large or small, rural or urban, established or just beginning, you will find a wealth of information in this volume that will help your business steer a course for the 1990s and beyond.

This new report features:

- Comprehensive business and economic information
- Historical economic data
- New trends and projections
- Analysis and interpretation of the data

The UNL Bureau of Business Research
Serving Nebraskans for 67 Years

Please send me the ***1991 Annual Business and Economic Report for Nebraska***. Enclosed is my check for $12.50 per copy. Return this form with a check or money order to:

Bureau of Business Research
University of Nebraska-Lincoln
200 CBA
Lincoln, NE 68588-0406

______ # copies ordered $______ enclosed

Name: ....

Organization: .... PO # ....

Street Address: .... Telephone: ....

City: .... State: .... Zip: ....

saw decreases in its gross state product at that time, but showed no signs of recovery even in 1983. 1983 was a bad year for Nebraska agriculture. Thus, the downturn in agriculture at that time reinforced an already weakened economy.

Given the outlook for next year's net farm income for the nation and the likelihood that Nebraska will share in those difficulties, we cannot expect much improvement, if any, in Nebraska's net farm income. Nebraska's nonfarm economy tends to follow the patterns of the U.S. economy.

Because we expect substantially weakened growth at the national level in 1991, we can be less than optimistic for the Nebraska economy. The rapid rates of growth in jobs that we have seen in our state for the last year and a half likely will decrease as the impacts of the national recession work their way through to the Nebraska economy.

State of the State Conference to be in December this Year

The third annual State of the State Conference series will be held at three locations in December this year, announced Bureau director Charles Lamphear. "This will enable business leaders to have economic information about the state and their regions before the close of the year," he said.

This year's theme will be "Nebraska's Opportunity in Expanding Global Markets." Programs will vary at each location to reflect issues affecting the specific local economies as well as the overall theme.

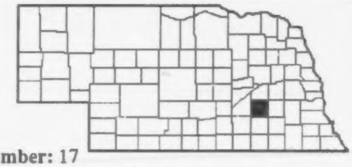
Following are the dates and locations for the conferences.

December 4	Columbus, New World Inn;
December 6	Scottsbluff, Elks Lodge; and
December 12	Lincoln, Nebraska Center for Continuing Education.

Reservations are now are being accepted for the State of the State workshops. For more information, call or write the Bureau of Business Research, University of Nebraska-Lincoln, Room 200 College of Business Administration, Lincoln, Nebraska 68588-0406, 402/472-2334.

County of the Month

York



York--County Seat

License plate prefix number: 17

Size of county: 577 square miles, ranks 50th in the state

Population: 14,900 (estimated) in 1988, a change of +0.4 percent from 1980

Median age: 31.2 years in York County, 29.7 years in Nebraska in 1980

Per capita personal income: $15,300 in 1988, ranks 22nd in the state

Net taxable retail sales ($000): $104,298 in 1989, a change of +4.4 percent from 1988; $42,928 during January-May 1990, a change of +2.8 percent from the same period one year ago

Number of business and service establishments: 498 in 1988; 61.2 percent had less than five employees

Unemployment rate: 2.6 percent in York County, 3.1 percent in Nebraska for 1989

Nonfarm employment (1989):

	State	York County
Wage & salary workers	705,672	6,360
	(percent of total)	
Manufacturing	13.4%	13.9%
Construction and Mining	3.6	2.9
TCU	6.5	5.9
Retail Trade	18.5	19.6
Wholesale Trade	7.6	15.7
FIRE	6.8	4.4
Services	23.7	20.8
Government	19.9	16.8
Total	100.0%	100.0%

Agriculture:

Number of farms: 899 in 1987, 911 in 1982

Average farm size: 388 acres in 1987

Market value of farm products sold: $109.1 million in 1987 ($121,370 average per farm)

Sources: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, Nebraska Department of Labor, Nebraska Department of Revenue

Merlin W. Erickson

Business in Nebraska
PREPARED BY BUREAU OF BUSINESS RESEARCH
Association for University Business & Economic Research

Business in Nebraska is issued as a public service and mailed free of charge upon request to 200 CBA, University of Nebraska-Lincoln, Lincoln, NE 68588-0406. Copyright 1990 by Bureau of Business Research, University of Nebraska-Lincoln. ISSN 0007-683X.

September 1990, Volume 46 No. 552

University of Nebraska-Lincoln--Martin Massengale, *Chancellor*
College of Business Administration--Gary Schwendiman, *Dean*

Bureau of Business Research
F. Charles Lamphear, *Director*
Merlin W. Erickson, *Research Associate*
Margo Young, *Communications Associate*
John S. Austin, *Research Associate*
Barbara Sumsion, *Composing Technician*
Lisa Darlington, *Secretary*
Carol Boyd, *Secretary*
David DeFruiter, *Information Systems Coordinator*

The University of Nebraska-Lincoln does not discriminate in its academic, admission, or employment programs and abides by all federal regulations pertaining to same.

Nonprofit Org.
U.S. Postage
PAID
Lincoln, Nebraska
Permit No. 46

#A1128
SRI
CONGRESSIONAL INFORMATION SVC
4520 EAST/WEST HIGHWAY
BETHESDA, MD 20814